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Assignment

The tongue contains small bumps called papillae within or near where taste buds are situated. In the tongues taste buds the taste receptors receive sensory output through two mechanisms;

- Depolarization
- Neurotransmitter release

From the axons of the taste receptors the sensory information is transferred to the three taste pathways via the the branch of cranial nerves vii,ix and x. The facial nerve carries the taste sensory input from the tongues anterior two-thirds. Then The rest of taste sensation from the throat palate and posterior tongue are transmitted by the branches of cranial nerve ix(glossopharyngeal nerve)and cranial nerve x(vagus nerve) from these cranial nerves, taste sensory input travels through the nerve fiber synapses to the solitary tract, the ventral posteromedial thalamic nuclei, and the thalamus.

In these three locations there are clustered neurons which respond to the same taste(sweet,sour,salty or bitter). The thalamus relays the information to the primary gustatory cortex where the perception of a particular taste is processed.