

Medicine for Managers

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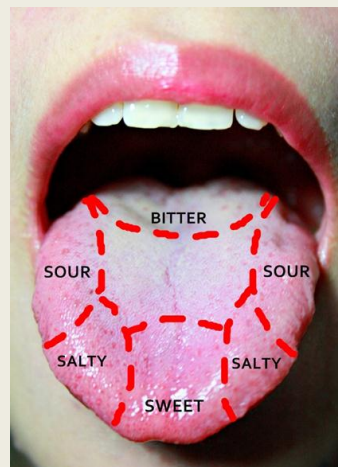
It's All According to Taste

Taste is probably the most underrated of the five senses. Sight, hearing and smell are regarded as crucial, taste often forgotten. Yet it allows you to distinguish and enjoy a dinner with lobster bisque, the marinated, spiced lamb shank and the individual fruits in the summer pudding. For spiders and butterflies, the legs provide the location of the taste buds; for humans they are mostly on the tongue.

So why do we have taste at all? After all we can smell food and taste seems almost unnecessary. Well, for humans it actually is a protective mechanism. Foods that are decaying or toxic generally taste horrible and, immediately we taste them, we spit them out. They also have a function in maintaining body chemistry though this is more important in other mammals. Smell and taste are intimately linked and a disorder of smell, such as when suffering from a cold, can make it hard to identify all but the strongest flavours. A flavour is a combination of taste and smell.

The average tongue has in excess of 10,000 taste buds and their presence adds dramatically to the enjoyment of the food. The tongue is in essence a muscle that is covered in mucous membrane. Besides its taste function it also assists in speech, chewing (mastication), swallowing (deglutition) and clearing food from the mouth. The surface of the tongue is covered in papillae which are projections of various types numbering four in total. The *circumvallate* papillae are the largest and clearly visible in a

V-shape at the back of the tongue. There are about 10-12 of them. *Foliate* papillae are folds of mucosa along the sides of the tongue. *Filiform* papillae are the most numerous, thin and hair-like and cover the upper surface of the tongue. They are not involved in taste. *Fungiform* papillae are mushroom-shaped, about 300 in number and found at the tip and along the sides of the tongue. Each papilla contains taste buds attached to nerve fibres and they can recognise the five different taste qualities, salt, sweet, acid, bitter (and umami).



Umami is a response to salts of glutamic acid, such as MSG used in processed and Chinese food.

Interestingly 'bitter receptors' are present in the trachea and bronchi and are probably associated with the expulsion of inhaled irritants. 'Sweet receptors' are also located in the duodenum where, when activated, they stimulate the pancreas to increase insulin production.

Loss of taste frequently occurs temporarily as a result of colds and upper respiratory infections. Other causes are Bell's palsy, heavy smoking, dry mouth and a variety of medicines.

So, taste is important for enjoyment and protection. The word has been hijacked to mean the ability to discriminate and I can complete this article no better than quoting Oscar Wilde: "I have the simplest tastes. I am always satisfied with the best".

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