

Other Senses, Integration and Cognition
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Taste

(Refer Slide Time: 00:17)



Other Senses, Integration, and Cognition: Taste

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Similar to the sense of smell, also the sense of taste is not yet used a lot in technical systems. This is why we provide only a very brief overview.

(Refer Slide Time: 00:26)

Gustatory sense. Gustatory perception:



sweet



sour



salty



bitter



Actually the sense of taste is not completely independent from the sense of smell. There is a mutual influence of both.

There are 5 different taste categories or qualities which can be differentiated within individual gustatory receptors. These are the senses for sweet, sour, salty, bitter and something we call umami or full-bodied. And for four of these senses you see illustrations of where actually the receptors are located on the tongue. You see in the picture behind me.

Interestingly there is only small part of the taste which is based on the gustatory senses alone. But there is significant influence also from the sense of smell.

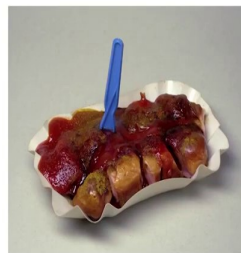
And this integration of sense and, sense of smell and taste happens in the thalamus where features are formed in the cerebral cortex. In this list which you see here, you might miss one very popular taste which is taste

(Refer Slide Time: 01:36)

Gustatory sense. Gustatory perception:

- No receptors for "hot"

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https://commons.wikimedia.org/wiki/File:Hot.jpg



of hot.

Actually the human sense does not have any receptors for hot but hot is something which comes from pain signals. Pain signals which are for example stimulated by capsaicinoid seeds, that is the chemical substance which stimulates the thermal receptors in the mouth and these are then sending pain signals to the brain. And the brain tries to relieve this pain by distributing endorphins to decrease it.

And this is actually what makes the sense of hot, taste of hot, something very popular, very positive for some people. They like this because they like the endorphins which are distributed by their brains.