THE SCIENCE OF MOUTHFEEL

How food feels in our mouths plays a big role in whether we enjoy it. Some foods we like to be crisp, others tender, and some – like cream cheese – smooth. Here are 7 things to know about mouthfeel.

1

Texture vs. mouthfeel.
Texture: a physical property of food – such as crumbly, crunchy, creamy. Mouthfeel: the way food or drink feels in your mouth, such as when sugars break down, fats melt or bubbles pop.

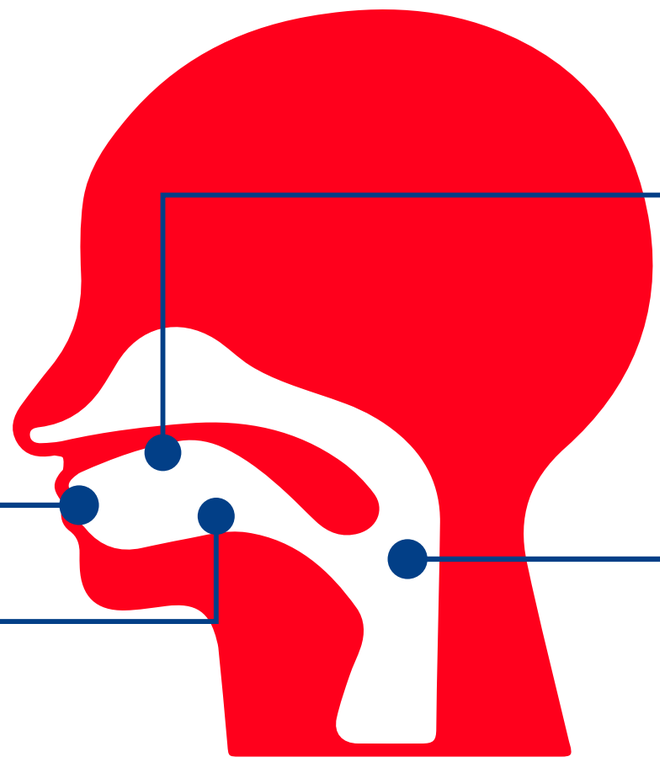
Big in Japan
The Japanese have 400 words for food texture, while there are only about 80 in English.

2

3. WHAT DO YOU FEEL WHERE?

The first bite. The mouth gets its first perception of the food, including features like hardness, viscosity, brittleness, size and shape.

Palate and tongue. During chewing, mouthfeel is affected by the way food particles, your oral surfaces and saliva interact. This can cause experiences of graininess, gumminess, and moisture release and absorption.



Chewing. As teeth grind food into smaller pieces, features like creaminess, fattiness, smoothness, slipperiness and melting are experienced.

Swallowing and aftertaste. Residues left in the mouth, such as fats or oils, are experienced. As is astringency, the dry-ing-out feeling caused by certain wines, teas and fruits.

4

Chocolate
Chocolate should snap when bitten, instantly start melting in the mouth, and have a smooth texture. Chocolate with cocoa particles larger than 30 µm is experienced as too gritty.

Cream cheese
High moisture content gives smoother mouthfeel, while milk fat produces a pleasant mouth-coating, by melting at just below body temperature.
Low-fat cream cheeses retain this creamy mouthfeel by including additives and emulsifiers.

5

6. WHAT DO YOU FEEL WHEN?

Temporal dominance of sensation (TDS) is a sensory method that studies the sequence of dominant sensations of a product during its consumption.That is, the dominant sensations vary over time.
It is typical to experience them in this order:

1. Crispy
2. Crunchy
3. Rough
4. Sticky
5. Smooth

7. THE STUDY OF MOUTHFEEL

Food rheology The study of how food flows and deforms under certain stresses and conditions.

Food tribology The study of the friction, wear and lubrication of food as it is processed in the mouth.

Psychorheology The study of the sensual perception of consumer products, particularly food and cosmetics.

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