To our brains, taste is actually a mash-up of a food’s flavor, its aroma and its touch or texture into a single experience. This combination begins with sight, followed by smell, and culminates during chewing as information originates from the item we’re eating and connects to our brain. Flavor is the technical term for what we commonly refer to as taste. We detect five separate flavors: sweet, salty, bitter, sour and umami. Our brain recognizes those five flavors by using our taste buds, which are located on the tongue and inside the roof of the mouth. Flavors are crucial to survival because they signal what is safe to eat and what is not.

When food is placed in the mouth, taste buds or receptors are activated and we perceive flavor. Concurrently, whatever we are eating also activates sensory cells, located side by side with the taste cells, so that at the same time we perceive qualities such as texture, temperature and spiciness or piquance. We consider this as part of taste because the contact with our tongue captures the sensation which we call texture or mouthfeel. Food is one of the few things that can stimulate all of the human senses concurrently.

We formerly believed that our receptors for taste were stagnant but it’s now understood that our taste receptors change over time. A recently published paper in BioEssays suggests that bacteria located in our gastrointestinal tract, or our microbiome, might have the ability to induce cravings and even alter our receptors. The research implies that our own internal bacteria exert their influence to regulate things like fat and vitamins. They may do this by altering our taste receptors so that certain foods taste better or worse. This may explain why we desire or crave certain foods but at other times are not as interested in them. In short, the study implies that cravers or chocolate-desiring individuals have different microbial makeup than chocolate-indifferent individuals, despite eating identical diets.

Aroma

Hold your nose when eating and you will notice that without aroma recognition there is no taste; this can also signal shorter longevity. When a University of Chicago study surveyed 3,000 people’s scent-identification ability, it found that those who had very poor or no aroma detection were likely to be deceased in five years.

The smell sensors located in our nose are called olfactory receptors. Recently, a team of biologists in Germany discovered that these receptors are also present in human skin cells and other human organs including our hearts. Scientists are now beginning to unlock the future of scent-based medicine and realize what perfumists and aromather-