

## The ear – 30 000 receptors help you hear

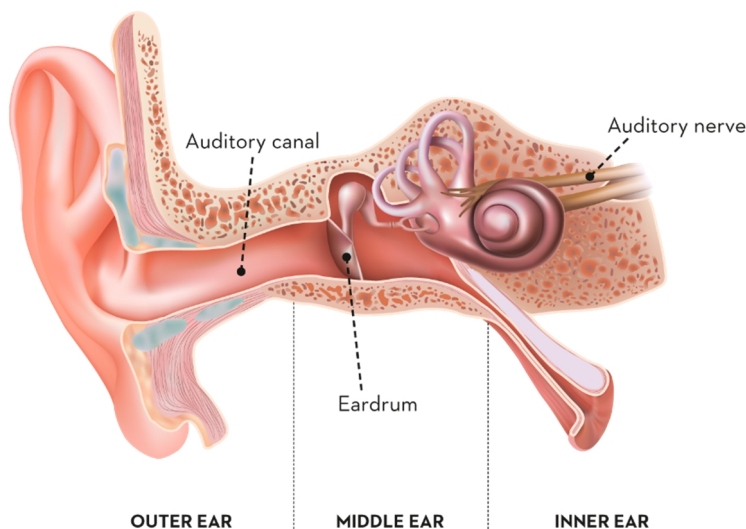
### EXTERNAL SOUNDS AND SOUNDS INSIDE YOUR MOUTH

Like sight, hearing is a reaction to **physical stimuli**.

For ears, these stimuli are sound waves.

We can distinguish between 2 types of sound. '**External**' sounds, for example the sound of cooking, and sounds '**inside your mouth**', which are caused by chewing. These 2 types of sound are not perceived by the same parts of the ear.

### OUTER, MIDDLE AND INNER EAR



The ear has 3 parts: the outer ear, middle ear and inner ear.

It comes as no surprise that external sounds are perceived by the outer ear. These sounds are then amplified in the middle ear.

As you chew food, it disintegrates causing sound vibrations. As the middle ear is connected to the back of your mouth, your

jawbones transmit these vibrations to the middle ear.

Whether for external sounds or sounds produced inside the mouth, the inner ear turns these sound waves into electric impulses. The auditory nerve transmits these impulses to the brain, which turns them into perceptions of sound.

### HEARING AND OUR EXPECTATIONS

The appearance of food can make us expect a certain sound in our mouths. For example, you expect to hear an apple crunch or a raw carrot make a snapping sound. You would also expect a biscuit to sound crunchy or a sparkling drink to fizz.

However, when you eat something, your hearing plays a more minor role than the other senses.