



## A Little Wiser

# Why do we eat hot peppers?

Why do we sometimes love to bring ourselves out in a sweat from eating hot peppers?

And does it destroy your taste buds?

*Resource* discusses this burning question with Kees de Graaf, professor of Sensory Science and Eating Behaviour.

The heat of peppers is caused by capsaicinoids, compounds given off by pepper plants to defend them against being devoured. De Graaf: 'The pain and heat you experience when you eat peppers are registered by the nerve endings of the *nervus trigeminus*, some of which are located on the tongue and lips.' Those nerve endings give off certain substances that cause local inflammation, possibly causing your lips to swell up, your mouth to water and tears to stream from your eyes. 'The taste buds have nothing to do with these sensations,' says De Graaf. Why would anyone in their right mind expose themselves to this ordeal? 'We often quite enjoy a bit of pain,' says De Graaf. 'Pain and pleasure take some of the same pathways through our nervous system and can coexist.' When the brain registers pain it produces endorphins and dopamines. Dopamines are pleasure chemicals that stimulate the 'hedonistic hotspot' – the G-spot

of your brain, if you like. This creates a feeling of euphoria and contributes to addiction too. But there are plenty of people who don't enjoy hot dishes. 'It's possible that genes play a role in this,' says De Graaf. 'But the most important factor is habituation. Very few babies like peppers. The chemical reaction to hot food is the same in everyone, but people find that after a couple of weeks of eating spicy good, they can tolerate hot dishes better.'

Conclusion: Your taste buds don't do much with peppers. And to deal with their fire: practice makes perfect. Who knows, you might even start enjoying them.  $\perp$



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## 'Pain and pleasure take the same pathways in our nervous system'

Kees de Graaf,  
Professor of Sensory  
Science and Eating  
Behaviour.

Every day we are bombarded with sometimes contradictory information. So what are the facts of the matter? In this feature, a WUR scientist answers a reader's burning question.

Asking questions is the way to gain wisdom. Do you dare to ask yours? Email us at [redactie@resource.nl](mailto:redactie@resource.nl)