

# Gentle touch loses its pleasure in migraine patients

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A recent study published in the journal *Cephalalgia*, the official journal of the International Headache Society, builds on the sensorial characteristics of migraine patients. The study, entitled "C-tactile touch perception in migraineurs—a case-control study", was led by Dr. Gudrun

Gossrau, from the University Hospital and Faculty of Medicine Carl Gustav Carus, Dresden, Germany.

Migraine is a neurological disorder that affects every sense. Leaving the [headache](#) aside, many other symptoms that make up the disease are the result of sensory abnormalities. Hypersensitivity to light (photophobia), sounds (phonophobia) and smells (osmophobia), nausea, vomiting, aura, allodynia (that pain in the scalp when combing or making hair ponytails), and other less common ones. These sensory disturbances make it evident that migraine is much more than a headache and that it affects people's functionality in a wider and substantial manner.

In Dr. Gossrau's study, to get an idea of how migraine influences sensory functioning, the researchers investigated the response to the tactile stimulus (light touch on the skin) of people with migraine. In addition to the discriminatory aspect of the tactile stimulus (location, the pressure of the stimulus), the researchers evaluated affective aspects of touch, that is, the sensation of pleasure associated with touch. The researchers applied different speeds of touch with a brush on the forearm and cheek (region innervated by the trigeminal nerve) and measured the associated pleasure, discomfort or pain responses. The effect of repeated stimuli in a row was also measured (30 stimuli repeated in 60 minutes of testing).

Fifty-two people without migraine (controls) and 52 patients were tested. Patients reported higher scores for pain in both applied areas (forearm and cheek) and less sensation of pleasure in the test of repeated stimuli. Interestingly, patients using triptan to abort their attacks showed normal scores. According to the authors, the same neurophysiological processes related to allodynia could explain these results.

This disturbance of sensory function seems to be specific to migraine. [In another study](#), conducted by two research groups in the U.S. and Israel, the sensory profile assessed through pressure and temperature stimuli

were compared between healthy people and patients with persistent post-traumatic headache (a type of secondary headache, caused by trauma in the head). The researchers subdivided patients into 2 main groups based on the characteristics of the pain, a group of patients with migraine-like headaches and another with tension-type headache-like pain.

The post-traumatic headache group with a migraine-like characteristic did not show substantial differences in the sensory profile in relation to the healthy group. Together with the former study, these data indicate that different types of headache have different origins and causes and modify the sensory function differently, as highlighted by the authors.

As migraine is a primary headache, that is, it is the disease and not the consequence of other diseases (such as traumatic post-traumatic headache), these studies emphasize the particularity of migraine as a neurological disease that causes many other disabilities other than pain.

As highlighted by Dr. Peter Goadsby, from the King's College London, United Kingdom, one of the most prolific headache researchers in the world and Chair of the Classification Committee of the International Headache Society, [migraine](#) is "an inherited tendency of the brain to lose control of its inputs".

**More information:** Hanna Sophie Lapp et al, C-tactile touch perception in migraineurs – a case-control study, *Cephalalgia* (2019).  
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