Pain automatically activates facial muscle groups

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A study has found that people who facially express pain in a more intense way are not exaggerating if their perception of a painful stimulation is controlled. The study conducted by Miriam Kunz is published in the November issue of *Pain*.

The study was conducted on 20 men and 20 women between the ages of 18 and 30. Kunz placed a heating device on their leg to provoke the painful stimulus. During the test, Kunz asked the test subjects to push a button when the heat became moderately painful as she filmed their facial expressions.

"Individuals who react to pain with intense facial expressions are in fact feeling more pain if we rely on quantitative verbal measures independent of the painful experience," says Kunz, a postdoctoral student at the Université de Montréal Faculty of Dentistry, Department of Stomatology, and the Institut universitaire de gériatrie de Montréal.

However, they have a lower tolerance for pain. "All test subjects with an intense facial reaction to pain estimated that the sensation was "moderately painful" between 45 and 47 degrees Celsius, while others had a higher threshold," she says.

All individuals have a non-verbal mode of communication influenced by culture, education, age, sex, etc. This mode relies on innate and universal programming. That is why a blind child knows how to smile, even if he has never seen his mother smile. "Pain, just like joy, sadness, fear,

surprise, anger and disgust automatically activate certain muscle groups that make the expression appear on the face," says Kunz.

Source: University of Montreal

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