

What we see affects what we feel

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Credit: Ruhr-Universitaet-Bochum

Chronic back pain is reduced when people watch a real-time video of their back for a short time. Watching it also increases the effectiveness of therapies such as massage. This has been shown by studies conducted by the team of Professor Martin Diers from the Department of Psychosomatic Medicine and Psychotherapy at the LWL University

Hospital of the Ruhr-Universität Bochum (RUB). The specialists therefore recommend the so-called multisensory integration in the treatment of pain.

People who suffer from [back pain](#) often feel significantly impaired. If the [pain](#) is chronic, it puts a strain on the whole life, affects [everyday life](#), and prevents patients from working or participating in social activities. "Patients are very familiar with their pain," says Martin Diers. "For example, they can say at which time exactly during the day the pain occurred or how it feels like. But for them it is difficult to describe the exact location of the pain."

Watching a video for one minute

Diers and his colleagues wanted to know if the chronic pain intensity could be modulated by looking at the painful site. He dedicated several studies to this problem, both with pain patients and with control subjects without back pain. In either case a [video camera](#) was used, which was placed behind the participants and transmitted the image of their backs in real time to a monitor in front of the person. The participants rated the intensity of their pain on a scale from zero to ten.

"We demonstrated that merely watching the real-time [video](#) of their own back reduces the [chronic back pain](#) intensity after one minute," concludes Martin Diers. If the patients saw another patient's video instead of their own, or a photo of their back or a book, no changes in pain intensity were reported.

The resolution of visual information is higher

"Pain stimuli activate certain [nerve cells](#) in the skin, which transmit a signal to the brain and are processed there," says the psychologist. "The

resolution of this system could be increased in conjunction with the visual information. This helps to determine the location of the painful stimulus more exactly.

Consequently, pain specialists take advantage of the combination of several senses. This is called [multisensory integration](#). For the application of this approach in treatments, they analysed the effect of watching the treated area of the body in different therapies for chronic back pain patients. During a massage of the painful area of the body, for example, they showed patients either the real-time video of the treatment or a recording of a massage of another person, a photo of their own back or a book, or they asked them to keep their eyes closed.

"We could demonstrate that the massage was much more effective if the patients were able to look at their back during the massage," concludes Martin Diers. "The same applied to manual therapy, a physiotherapeutic treatment using mobilisation." Diers advocates the integration of such multisensory processes into treatment.

Provided by Ruhr-Universitaet-Bochum

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