



# In Motion

Highlighting Articles Advancing Pain Research in Canada and the World

## Featured article:

Zangrandi, A., Allen Demers, F., Schneider, C. **Complex Regional Pain Syndrome: A Comprehensive Review on Neuroplastic Changes Supporting the Use of Non-invasive Neurostimulation in Clinical Settings.** *Frontiers in Pain Research*, 2021;2:732343.

<https://doi.org/10.3389/fpain.2021.732343>

## Key insights from the study:

- **Neuroplasticity in CRPS:** The article discusses how Complex Regional Pain Syndrome (CRPS) causes certain unwanted changes in the brain, which play a big role in worsening pain. Understanding these changes is crucial for tackling the root causes of pain in CRPS.
- **Benefits of Brain Stimulation:** The review evaluates methods like magnetic brain stimulation and magnetic nerve or muscle stimulation, which might help reverse these brain changes and reduce pain without needing surgery.
- **Clinical Implications:** The findings point to the potential of customizing these brain stimulation techniques to match individual patient needs, potentially making pain treatment more effective.



**Quick Article Link:** <https://www.frontiersin.org/articles/10.3389/fpain.2021.732343/full>

## What happened?

In this comprehensive review, researchers analyzed a wide range of scientific studies to better understand the role of brain changes in CRPS and the effectiveness of non-invasive brain stimulation methods. The review process involved collecting and comparing results from existing research to determine how these stimulation methods could impact pain relief. This analysis helped summarize existing knowledge and identify promising treatment avenues.

## Why is it important?

This review brings to light the complex nature of CRPS and the significant role brain changes play in the disease. It also showcases promising treatments that involve stimulating the brain or the muscles in a non-invasive and painless way, which could transform the treatment landscape for CRPS by targeting the underlying brain changes.

## What now?

The researchers encourage more studies to further confirm the benefits of non-invasive muscle and brain magnetic stimulation for CRPS and to refine these techniques for use in clinical settings. Future treatments tailored to the specific brain changes observed in each patient could lead to more effective pain management solutions.



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