

The Journal of Pain

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Critical Review

917 The Efficacy of Web-Based Cognitive Behavioral Interventions for Chronic Pain: A Systematic Review and Meta-Analysis

Debora Duarte Macea, Krzysztof Gajos,
Yasser Armynd Daglia Calil, and Felipe Fregni

This meta-analysis demonstrates that web-based interventions for chronic pain result in small pain reductions. These results advance the field of web-based cognitive behavioral interventions as a potential therapeutic tool for chronic pain and can potentially help clinicians and patients with chronic pain by decreasing treatment costs and side effects.

Original Reports

930 Acute Pain Increases Phosphorylation of DCLK-Long in the Edinger-Westphal Nucleus but not in the Hypothalamic Paraventricular Nucleus of the Rat

Tom P. H. Rouwette, Tamás Kozicz, Nicola F. M. Olde Loohuis,
Balázs Gaszner, Erno Vreugdenhil, Gert Jan Scheffer,
Eric W. Roubos, Kris C. Vissers, and Wim J. J. M. Scheenen

Pain is a burden for society and the individual, and although the mechanisms underlying pain are relatively well-known, its treatment remains difficult and incomplete. Pain stress can lead to diseases like chronic pain and depression. This study reports that differential doublecortin-like kinase phosphorylation in stress-sensitive brain areas is a potential novel therapeutic target in pain research.

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ON THE COVER

The doublecortin-like kinase (DCLK) gene is crucially involved in neuronal plasticity and microtubule-guided retrograde transport of signaling molecules. The differential DCLK-phosphorylation in stress-sensitive brain areas is a potential novel therapeutic target in pain research. See Rouwette, et al, page 930.

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Characterization of Fasudil in Preclinical Models of Pain

Janel M. Boyce-Rustay, Gricelda H. Simler,
Steve McGaraughty, Katharine L. Chu, Erica J. Wensink,
Anil Vasudevan, and Prisca Honore

Fasudil was evaluated in different preclinical pain models of neuropathic, osteoarthritic, inflammatory as well as capsaicin-induced acute pain, and secondary mechanical hypersensitivity. In this article, the authors find that Fasudil was shown to have efficacy in neuropathic and nociceptive pain models. These findings may help identify new therapeutic treatments for pain in the clinic.

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Sesamol Suppresses Neuro-Inflammatory Cascade in Experimental Model of Diabetic Neuropathy

Kanwaljit Chopra, Vinod Tiwari, Vipin Arora, and
Anurag Kuhad

Development of tolerance, inadequate relief, and potential toxicity of classical antinociceptives warrant the investigation of newer agents to relieve diabetic neuropathic pain. This study sought to explore the effect of sesamol on thermal and mechanical hyperalgesia, allodynia, oxidative-nitrosative stress, inflammation, and apoptosis in STZ-induced experimental diabetes. Results suggest sesamol may find clinical application to treat neuropathic pain in the diabetic patient.

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Pain and Functioning of Rheumatoid Arthritis Patients Based on Marital Status: Is a Distressed Marriage Preferable to No Marriage?

Jennifer Barsky Reese, Tamara J. Somers, Francis J. Keefe,
Angelia Mosley-Williams, and Mark A. Lumley

Relationships may influence adjustment to chronic pain conditions such as rheumatoid arthritis. Marital status and marital adjustment to pain and physical and psychological disability in rheumatoid arthritis were examined in this study. These findings suggest that being married is not associated with better health, but that being in a well-adjusted or non-distressed marriage is linked with less pain and better functioning. Results underscore the importance of considering not only marital status but also degree of marital adjustment, and may help inform clinical interventions.

965 **Antinociceptive Effects of (1 → 3),(1 → 6)-Linked β -Glucan Isolated From *Pleurotus pulmonarius* in Models of Acute and Neuropathic Pain in Mice: Evidence for a Role for Glutamatergic Receptors and Cytokine Pathways**

Cristiane Hatsuko Baggio, Cristina Setim Freitas, Daniel Fernandes Martins, Leidiane Mazzardo, Fhernanda Ribeiro Smiderle, Guilherme Lanzi Sasaki, Marcello Iacomini, Maria Consuelo Andrade Marques, and Adair Roberto Soares Santos

The aim of this work was to extend the antinociceptive effect of β -glucan and to evaluate its role in different models of nociception. Researchers evaluated effects using intraplantar injection of glutamate and intrathecal injection of glutamatergic receptor agonists, substance P and pro-inflammatory cytokines, interleukin-1 β and tumor necrosis factor- α (acute pain), and neuropathic pain induced by partial sciatic nerve ligation (chronic pain). After further experiments, this compound may represent a new pharmacological agent for the treatment of clinical pain.

972 **A Multicenter, Randomized, Double-Blind, Controlled Dose Finding Study of NGX-4010, a High-Concentration Capsaicin Patch, for the Treatment of Postherpetic Neuralgia**

Lynn R. Webster, T. Philip Malan, Michael M. Tuchman, Martin D. Mollen, Jeffrey K. Tobias, and Geertrui F. Vanhove

Postherpetic neuralgia is a painful complication of acute herpes zoster. This multicenter, double-blind, controlled study randomized 299 patients to receive either NGX-4010, a high-concentration capsaicin (8%) patch, or a low-concentration capsaicin (0.04%) control patch. This article considers the safety and efficacy of NGX-4010 applied for 3 different durations (30, 60, or 90 minutes) in patients with postherpetic neuralgia.

983 **Assessing Pain Behaviors in Healthy Subjects Using the Critical-Care Pain Observation Tool (CPOT): A Pilot Study**

Yannick Tousignant-Laflamme, Patricia Bourgault, Céline Gélinas, and Serge Marchand

The Critical-Care Pain Observation Tool (CPOT) is a behavioral scale recommended by experts for pain assessment in critically ill patients unable to communicate verbally. The relationship between self-reports of pain intensity and the CPOT score was evaluated. Results show that the CPOT score is significantly correlated with the self-report of pain intensity, supporting its clinical use.

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Pain at Presentation and Survival in Hepatocellular Carcinoma

Brian I. Carr and Lynette Pujol

Hepatocellular carcinoma (HCC) is a leading cause of death in the world. This article presents one of the first looks at correlates of pain and survival in HCC. The incidence of pain was examined among a large patient database derived from unresectable patients. Those with pain at presentation had worse prognosis and adverse tumor characteristics, this report finds.

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The Association Between Incident Self-reported Fibromyalgia and Nonpsychiatric Factors: 25-years Follow-up of the Adventist Health Study

Chan-Jin Choi, Raymond Knutsen, Keiji Oda, Gary E. Fraser, and Synnove Fonnebo Knutsen

The association between fibromyalgia (FM) and prior somatic diseases, lifestyle factors, and health behaviors among 3,136 women was considered in this report, showing that smoking as well as prevalent allergies, and a history of hyperemesis gravidarum, seem to predict development of FM in women. No significant association was found with number of surgeries, history of peptic ulcer, or taking medications to control various symptoms. This may help identify persons at high risk of developing FM.

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Pain Intensity and Duration Can Be Enhanced by Prior Challenge: Initial Evidence Suggestive of a Role of Microglial Priming

Leah E. Hains, Lisa C. Loram, Julie L. Weiseler, Matthew G. Frank, Erik B. Bloss, Paige Sholar, Frederick R. Taylor, Jacqueline A. Harrison, Thomas J. Martin, James C. Eisenach, Steven F. Maier, and Linda R. Watkins

Under certain conditions, responses of activated microglia can become intensified. Enhanced microglial production of proinflammatory products may result from priming (sensitization), similar to macrophage priming. The authors hypothesized that if spinal microglia were primed by an initial inflammatory challenge, subsequent challenges may boost pain. They conclude that spinal microglial priming may increase vulnerability to pain enhancement.

Antinociceptive Effect of Stimulating the Occipital or Retrosplenial Cortex in Rats

**Glauca Melo Reis, Quintino Moura Dias,
João Walter S. Silveira, Flavio Del Vecchio,
Norberto Garcia-Cairasco, and Wiliam A. Prado**

A role for the occipital or retrosplenial cortex in nociceptive processing has not been demonstrated yet, but connections from these cortices to brain structures involved in descending pain inhibitory mechanisms have been reported. This work shows that the electrical stimulation of the occipital or retrosplenial cortex produces antinociception in the rat tail-flick and formalin tests, enhancing the understanding of the role of cerebral cortex in the control of pain.

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