

The Journal of Pain

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Critical Reviews

99 **Placebo Responses in Long-Standing Complex Regional Pain Syndrome: A Systematic Review and Meta-Analysis**

Gashirai K. Mbizvo, Sarah J. Nolan, Turo J. Nurmikko, and Andreas Goebel

The typical placebo response in randomized trials studying complex regional pain syndrome (CRPS) is unknown. The authors recently observed a surprising near-absence of placebo response in a randomized controlled trial conducted on patients with long-standing CRPS. To investigate the absence of placebo response in long-standing CRPS further, the authors reviewed suitable randomized controlled trials published between 1966 and 2013. The authors report finding no evidence for placebo analgesia, except at very early time points. These results can help inform the design of future placebo analgesia research in long-standing CRPS.

116 **A Review of the Use of the Number Needed to Treat to Evaluate the Efficacy of Analgesics**

Nathaniel Katz, Florence C. Paillard, and Richard Van Inwegen

Standardized measures of efficacy are needed to compare analgesic efficacy across trials. The number needed to treat (NNT) is considered a statistically robust and readily interpretable measure used for evaluation. The NNT is widely used to compare treatments, helping physicians make decisions and informing decisions for market access and more. However, the NNT is also associated with specific weaknesses, including difficulties in interpretation and distortions in calculation as placebo effects approach treatment effects, with the possibility of infinite values. This article reviews the uses of the NNT and the potential problems associated with its calculation, use, and interpretation. Clinicians should be aware of these issues when interpreting clinical trial data based on the NNT.

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ON THE COVER

Motivational accounts of pain behavior and disability suggest that attempts to avoid or control pain may paradoxically result in heightened attention to pain-related information. This study investigated the impact of attempts to control pain on somatosensory processing at the pain location. The results provide further insight into the motivational mechanisms of pain-related attention and point to the negative consequences of trying to control uncontrollable pain. See Durnez and Van Damme, page 135.

Commentary

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Number Needed to Treat—Just One of the Cards in the Pack

Andrew Moore

Original Reports

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Nonopioid Substance Use Disorders and Opioid Dose Predict Therapeutic Opioid Addiction

Kelly L. Huffman, Elizabeth R. Shella, Giries Sweis,
Sandra D. Griffith, Judith Scheman, and Edward C. Covington

Limited research examines the risk of therapeutic opioid addiction (TOA) in patients with chronic noncancer pain. This study examined TOA among 199 patients undergoing long-term opioid therapy at the time of admission to a pain rehabilitation program. It was hypothesized that nonopioid substance use disorders and opioid dosage would predict TOA. Results suggest that patients should be screened for nonopioid substance use disorders prior to prescribing. In the absence of improvement in pain or function, there is a low threshold for addiction screening.

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Trying to Fix a Painful Problem: The Impact of Pain Control Attempts on the Attentional Prioritization of a Threatened Body Location

Wouter Durnez and Stefaan Van Damme

When persistent pain exists, pain control or avoidance itself may become one's focal goal. It is largely unknown how pain-related information is processed when such a goal is pursued. Motivational accounts of pain behavior and disability suggest that attempts to avoid or control pain may paradoxically result in heightened attention to pain-related information. This study investigated the impact of attempts to control pain on somatosensory processing at the pain location. It provides further insight into the motivational mechanisms of pain-related attention, and it points to the negative consequences of trying to control uncontrollable pain.

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The Current State of Physical Therapy Pain Curricula in the United States: A Faculty Survey

Marie K. Hoeger Bement and Kathleen A. Sluka

Insufficient pain education is problematic across the health care spectrum. Recent educational advancements have been made to combat the deficits in pain education to ensure that health care professionals are proficient in assessing and managing pain. The purpose of this survey was to determine the extent of pain education in current Doctorate of Physical Therapy schools in the United States, including how pain is incorporated into the curriculum, the amount of time spent teaching about pain, and the resources used to teach about pain. This survey demonstrates how pain education is incorporated into physical therapy schools and highlights areas for improvement such as awareness of recent educational advancements.

- 153** **A 2-Item Short Form of the Pain Self-Efficacy Questionnaire: Development and Psychometric Evaluation of PSEQ-2**
Michael K. Nicholas, Brian E. McGuire, and Ali Asghari
- The Pain Self-Efficacy Questionnaire (PSEQ) is an established 10-item measure of pain self-efficacy that is widely used in clinical and research settings. However, a shorter measure would reduce patient and researcher burden and save valuable time in busy clinical settings. The aim of this study was to develop and confirm the psychometric properties of a valid and reliable 2-item short form of the PSEQ (PSEQ-2). The authors report that this tool appears to be suitable for use in clinical and research settings.
- 164** **Assessing Clinically Meaningful Treatment Effects in Controlled Trials: Chronic Migraine as an Example**
David W. Dodick, Catherine C. Turkel, Ronald E. DeGryse, Hans-Christoph Diener, Richard B. Lipton, Sheena K. Aurora, Marissa E. Nolan, and Stephen D. Silberstein
- Chronic migraine is a chronic pain condition. Currently, only onabotulinumtoxinA is approved specifically for headache prophylaxis in adults with chronic migraine. Topiramate is the only other therapeutic agent with double-blind, placebo-controlled evidence in this population. This report sought to determine the clinical meaningfulness of recent trials among chronic migraine patients. The authors conclude that clinical data indicate that statistically significant, clinically relevant treatment benefits exist for both onabotulinumtoxinA and topiramate, and support use of these treatments as meaningful headache prophylaxis in chronic migraine.
- 176** **Effect of Types and Anatomic Arrangement of Painful Stimuli on Conditioned Pain Modulation**
David M. Klyne, Annina B. Schmid, G. Lorimer Moseley, Michele Sterling, and Paul W. Hodges
- The perceived intensity of pain is reduced in the presence of a painful stimulus in another area of the body. This phenomenon is referred to as conditioned pain modulation (CPM) and is considered important for pain modulation and development of pain disorders. The various methods used to study CPM limit comparison of findings. We investigated the influence of key methodologic variations on CPM and the properties of CPM when the back is used for the test stimulus or the conditioning stimulus. The authors report that the induction and magnitude of CPM is independent of stimuli arrangement, as long as ipsilateral homotopic sites are avoided. These findings help clarify methods to study CPM.

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The Relationship Among Psychological and Psychophysiological Characteristics of Fibromyalgia Patients

Kati Thieme, Dennis C. Turk, Richard H. Gracely,
William Maixner, and Herta Flor

This study examined the relationship of psychophysiological response patterns in fibromyalgia (FM) with psychological characteristics and comorbid mental disorders. Cluster analysis revealed 4 subgroups of patients who differed on pain characteristics and cognitive, affective, and behavioral responses to pain and stress. These results suggest that unique psychophysiological response patterns are associated with psychological coping and mental disorders in FM patients. Identifying mechanisms that contribute to these group differences will further the understanding of the mechanisms involved in the development and maintenance of FM and suggest differential treatment strategies.

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Errata

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