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Focus Article

369 AAPT Diagnostic Criteria for Peripheral Neuropathic Pain: Focal and Segmental Disorders

Roy Freeman, Robert Edwards, Ralf Baron, Stephen Bruehl, Giorgio Cruccu, Robert H. Dworkin, and Simon Haroutounian

Peripheral neuropathic pain is among the most prevalent types of neuropathic pain, but there is no comprehensive classification system that incorporates contemporary clinical, diagnostic, biological, and psychological information. This article covers the taxonomy for four disorders as part of the Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks (ACTION) public-private partnership and the American Pain Society collaborative to develop a standardized, evidence-based taxonomy initiative: the ACTION-APS Pain Taxonomy. The taxonomy is evidence-based with the following dimensions: 1) core diagnostic criteria; 2) common features; 3) common medical and psychiatric comorbidities; 4) neurobiological, psychosocial, and functional consequences; and 5) putative neurobiological and psychosocial mechanisms, risk factors, and protective factors.

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ON THE COVER

In experiments on pain, participants are frequently exposed to non-painful and painful stimuli, yet the conventional pain-rating scales lack a non-painful range and a clear point of transition from non-painful to painful events. The Sensation and Pain Rating Scale (SPARS) assesses the full stimulus intensity range, extending from no sensation (rating: -50) to worst pain imaginable (rating: +50), and it explicitly identifies pain threshold (rating: 0). In this study, the authors tested the SPARS in two experiments using laser heat stimuli to establish its stimulus-response characteristics, and to compare it to scales that assess non-painful and painful events. These findings may be useful to research that involves exposing participants to a range of stimulation intensities or requires a clear distinction between non-painful and painful events. See Madden, et al, page 472.

American
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RESEARCH
EDUCATION
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Critical Reviews

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Design and Reporting Characteristics of Clinical Trials of Select Chronic and Recurrent Pediatric Pain Conditions: An Analgesic, Anesthetic, and Addiction Clinical Trial Translations, Innovations, Opportunities, and Networks Systematic Review

Marina R. Connolly, Jenna Y. Chaudari, Ximeng Yang, Nam Ward, Rachel A. Kitt, Rachel S. Herrmann, Elliot J. Krane, Alyssa A. LeBel, Shannon M. Smith, Gary A. Walco, Steven J. Weisman, Dennis C. Turk, Robert H. Dworkin, and Jennifer S. Gewandter

Fewer randomized clinical trials (RCTs) are conducted for chronic or recurrent pain in pediatric populations compared with adult populations, and data to support treatment efficacy in children are limited. This article evaluates the design features and reporting practices of RCTs for chronic and recurrent pain that are likely unique to, or particularly important in, a pediatric population. The aim is to promote improvements in the evidence base for pediatric pain treatments. This review article demonstrates inadequacies in the reporting quality of key features and provides recommendations that address shortcomings, helping to promote continued efforts toward improving the quality of the design and publication of future pediatric clinical pain trials.

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Contributions of Nociresponsive Area 3a to Normal and Abnormal Somatosensory Perception

Barry L. Whitsel, Charles J. Vierck, Robert S. Waters, Mark Tommerdahl, and Oleg V. Favorov

The need for research focused on identification of the central nervous system pain mechanisms that underlie chronic pain is widely acknowledged. This article presents evidence that neurons in an anterior sector of area 3a contribute to cutaneous pain perception. According to this literature review, many investigations have involved optical intrinsic signal imaging and/or neurophysiological recordings from the nearly lissencephalic cerebral cortex of squirrel monkeys. These studies suggest that some human chronic pain disorders might be attributable to neuroplastic adaptation of GABAA receptor-mediated inhibition, resulting in abnormally excessive nociresponsive area 3a neuron activation.

Original Reports

420 Operant Learning Versus Energy Conservation Activity Pacing Treatments in a Sample of Patients With Fibromyalgia Syndrome: A Pilot Randomized Controlled Trial

Mélanie Racine, Mark P. Jensen, Manfred Harth, Patricia Morley-Forster, and Warren R. Nielson

Activity Pacing is a form of cognitive behavioral treatment for chronic pain management in patients with fibromyalgia syndrome (FMS). There are two divergent treatment approaches: operant learning (OL) and energy conservation (EC). The OL approach aims to reinforce a switch from pain-contingent to goal-directed behavior using activity rest cycling or moving at a “slow and steady pace” to achieve daily life goals. EC focuses on patient energy expenditure and seeks to achieve a balance between accomplishing day-to-day valued activities/goals and resting. This study’s aim was to assess the efficacy of activity pacing in FMS patients. The results suggest the possibility that OL may be more beneficial than EC and could potentially be viewed as an effective pacing treatment for patients with FMS.

440 Fulranumab as Adjunctive Therapy for Cancer-Related Pain: A Phase 2, Randomized, Double-Blind, Placebo-Controlled, Multicenter Study

Neal Slatkin, Naim Zaki, Steven Wang, John Louie, Panna Sanga, Kathleen M. Kelly, and John Thippawong

Pain resulting from the growth of malignant cells is one of the most common and distressing symptoms associated with cancer. This study assessed efficacy and safety of fulranumab as a pain therapy adjunctive to opioids in terminally ill cancer patients. Ninety-eight patients were randomized to receive one subcutaneous injection of fulranumab or placebo. Although no differences were seen between fulranumab and placebo groups on the primary endpoint, potential benefit is suggested based on some secondary endpoints that anti-nerve growth factor agents may provide some clinical benefit in cancer patients who fail to respond adequately to opioids and other common co-analgesics. This work supports further research of anti-NGF therapy in cancer-related pain.

453 Greater Response Interference to Pain Faces Under Low Perceptual Load Conditions in Adolescents With Impairing Pain: A Role for Poor Attention Control Mechanisms in Pain Disability?

Jennifer Y.F. Lau, Eva Sprecher, Sara Haas, Stephen Lisk, David Pagliaccio, Louise Sharpe, Yair Bar-Haim, and Daniel S. Pine

Persistent pain in young people is common, but individuals vary in how much pain impacts daily life. This study assessed whether poor attentional control characterizes young people with interfering levels of pain. An emotion-priming visual search task was used to assess the hypotheses around the ability of adolescents with no/low pain, and those with high- and low-interfering pain.

Results show that young people with moderately and highly interfering pain responded slower on an easy search task after seeing a pain face than after seeing a neutral face. If replicated, these findings could mean that boosting the ability to control attention toward and away from threatening cues is an effective strategy for managing interference from pain.

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Endogenous Pain Modulation Profiles Among Individuals With Chronic Pain: Relation to Opioid Use

Marc O. Martel, Kristian Petersen, Marise Cornelius, Lars Arendt-Nielsen, and Robert Edwards

The aims of this cross-sectional study were to examine the association between measures of conditioned pain modulation (CPM) and temporal summation (TS) in individuals with chronic pain, and to examine whether this association was moderated by demographic, psychological or medication-related variables. Individuals with back or neck pain completed questionnaires and underwent a series of quantitative sensory testing procedures assessing CPM and TS. Results indicate that greater endogenous pain-inhibitory capacity is associated with lower levels of pain facilitation. This association was not significant among opioid users, suggesting that opioids might compromise the functioning and interrelationship between endogenous pain modulatory systems.

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Was That Painful or Nonpainful? The Sensation and Pain Rating Scale Performs Well in the Experimental Context

Victoria J. Madden, Peter R. Kamerman, Valeria Bellan, Mark J. Catley, Leslie N. Russek, Danny Camfferman, and G. Lorimer Moseley

In experiments on pain, participants are frequently exposed to non-painful and painful stimuli, yet the conventional pain-rating scales lack a non-painful range and a clear point of transition to painful events. The Sensation and Pain Rating Scale (SPARS) assesses the full stimulus intensity range, extending from no sensation to worst pain imaginable, and it explicitly identifies pain threshold. In this study, the authors tested the SPARS in two experiments to establish its stimulus-response characteristics, and to compare it to scales that assess non-painful and painful events. These findings may be useful to research that involves exposing participants to a range of stimulation intensities or requires a clear distinction between non-painful and painful events.

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Influence of Abuse History on Concurrent Benzodiazepine and Opioid Use in Chronic Pain Patients

Jennifer Pierce, Stephanie Moser, Afton L. Hassett, Chad M. Brummett, Julie A. Christianson, and Jenna Goesling

An important predictor of opioid overdose is co-use of benzodiazepines, which are often prescribed for anxiety. Coping with anxiety may be particularly difficult among individuals with a history of abuse, as it is often linked to higher pain severity and poorer coping skills. This article examines the association between

history of abuse victimization and co-use of benzodiazepines among chronic pain patients reporting current opioid use. Results show that cumulative victimization across the lifespan may contribute to co-use by increasing sensitivity to psychological or physical distress or by negatively impacting coping skills.

481 Incident Chronic Spinal Pain and Depressive Disorders: Data From the National Comorbidity Survey

Karen B. Schmalzing, and Zachary A. Nounou

Chronic spinal pain and depression are common conditions associated with significant morbidity and healthcare utilization. This study examined pre-existing depression as a risk factor for the development of chronic spinal pain, and pre-existing chronic spinal pain as a risk factor for the development of depression. Chronic spinal pain and depressive disorders, especially chronic depression, increase the likelihood for the subsequent development of the other condition. The results underscore the need to routinely assess for the presence of both disorders, given the presence of one to mitigate the effects of developing comorbid conditions.

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