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<b>The Physiology of the Acute Pain Pathway</b>	<b>305</b>
Andrew J. Meyr and John S. Steinberg	

A look into the physiology and biomedical science is a crucial starting point when investigating a topic. It is essential for a physician to have a thorough understanding of the basic mechanisms of acute pain physiology to make diagnoses, guide treatments, and follow outcomes. This article reviews the physiology of acute pain with a clinical emphasis on “attack points” of the pathway where interventions may best be warranted. It also highlights differences in acute pain based on the anatomy and mechanism of the tissue injury. The multimodal pain management approach is also introduced to emphasize clinical treatment options.

<b>The Pathophysiology of the Chronic Pain Cycle</b>	<b>327</b>
Andrew J. Meyr and Barry Saffran	

The diagnosis and treatment of chronic pain is an area in which the field of medicine is failing to offer the best possible care to patients. This article presents a clinically driven view of the condition with an emphasis on active recognition and intervention. Defining aspects of chronic pain, including the emotional and psychological components, are introduced with regard to recognition and diagnosis. The pathophysiologic mechanisms that underlie the transition from acute pain to chronic pain are reviewed from the standpoint of treatment intervention. Finally, specific chronic pain states that affect the lower extremities are considered.

**Painful Diabetic Neuropathy**

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Rhonda S. Cornell and Ivica Ducic

The podiatric physician often encounters complex painful neuropathies in daily practice. Diabetic neuropathy is one form of chronic neuropathic pain dealt with on a regular basis. The goal of this article is to review the pathophysiology, diagnosis, and treatment options of this complaint. Medical and surgical interventions are discussed, with a clinical emphasis on patient selection and prevention.

**A Clinical Approach to Complex Regional Pain Syndrome**

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David Pontell

The goal of this article is to provide an introductory look into current concepts regarding chronic regional pain syndrome. Great advances have been made over the last 15 years, but we are far from a complete understanding of this disorder. This article places great emphasis on early clinical recognition and treatment intervention.

**Current Concepts in Pain Management: Pharmacologic Options for the Pediatric, Geriatric, Hepatic and Renal Failure Patient**

381

Stephen S. Stern and Mario N. Ponticello

This article provides a review for current practice. Strict guidelines are not available on some topics, and they may never be drafted because pain is such a unique individual experience. It is recommended to coordinate care with other medical specialties when patients present with organ dysfunctions or are at the extremes of age. More data are required in the field of pain management, particularly with regard to renal and hepatic dysfunction. In turn, these data serve as a foundation for physicians making practice decisions based on current evidence. Until this is achieved, clinicians must rely on anecdotal evidence and the experiences of others to treat a complex issue: pain.

**Non-Pharmacologic Pain Management Intervention**

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Melissa L. Adams and Gary J. Arminio

Unfortunately, many physicians and patients only seek pharmacologic treatments to aid in pain relief; however, many non-pharmacologic interventions exist with excellent potential for pain treatment. This article reviews several of these strategies with an emphasis on clinical indications and expected outcomes. The topics of chronic pain psychology and prescription writing also are reviewed. As a medical provider, it is important to remain open minded to alternative approaches to pain control.

<b>Lower Extremity Regional Anesthesia with the Low Sciatic Nerve Block</b>	<b>431</b>
Keith Goss	

Regional anesthesia with local anesthetics is an important component of the perioperative pain management algorithm in the context of lower extremity orthopedic surgery. These techniques have proved to be consistent and effective in minimizing postoperative pain and narcotic usage, and in reducing the morbidity associated with lower extremity surgery. The mechanisms of local anesthetic agents as they relate to acute surgical pain are reviewed in this article, with an emphasis on the low sciatic nerve block. Administration techniques and the clinical experience of the author with this blockade are discussed.

<b>Peri-Operative Pain Management</b>	<b>443</b>
Robert Hallivis, Todd A. Derksen, and Andrew J. Meyr	

Surgery is a circumstance in which we know that we will cause pain. Although most of our perioperative pain management interventions are symptomatic, several strategies can reduce and even prevent pain in the perioperative setting. Because the physiologic mechanisms of postoperative pain are understood, it is possible to interrupt these mechanisms before the patient actually becomes symptomatic. This article reviews the literature and presents these strategies with the hope of implementation of the readers.

<b>Post-Operative Pain Management Using Patient-Controlled Analgesia</b>	<b>465</b>
Jillene R. Costa and Robert Coleman	

Patient-controlled analgesia is an effective form of postoperative pain management for select lower extremity orthopedic procedures in the in-patient setting. The goal of this article is to present an introduction to the prescription and management of patient-controlled analgesia in the acute, postoperative setting. The surgeon should have a thorough understanding of this intervention as it relates to pain control and overall patient care.

<b>Pain Management Clinics</b>	<b>477</b>
Sandeep Sherlekar	

Multidisciplinary pain management clinics provide the standard of care for the diagnosis, evaluation, and treatment of patients who have chronic pain. Primary care physicians are encouraged to maintain an active role in the care of patients after referral to these pain centers, often for long-term opiate therapy or complex regional pain syndrome. Insights into the role of pain management clinics after referral are discussed in this article.

<b>Understanding Addiction: The Orthopedic Surgical Perspective to a Significant Problem</b>	<b>493</b>
Kimberly L. Bobbitt, L. Marie Keplinger, and Husam K. Althari	

The realm of addiction and addiction medicine is one in which physicians receive little formal training, particularly in surgical subspecialties. This article presents an overview of addiction medicine and treatment, concentrating on the neurophysiology, psychological aspects, and terminology. Assessment tools and objective findings for recognizing addiction in patients in pain are discussed, as is the management of acute pain and perioperative considerations for patients who are undergoing opioid treatment programs.

<b>Clinical Pain Management Peri-Operative Scenarios</b>	<b>517</b>
Andrew J. Meyr and John S. Steinberg	

This article reinforces the clinical points of emphasis that have been stressed throughout this issue in a case scenario format. Common situations dealt with by physicians are examined to highlight the underlying physiology of the specific complaints and treatment interventions. The goal of this article is to present an evidenced-based review of pain management interventions in a format that allows for reader incorporation.

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