

**This article is a CME/CE certified activity. To earn credit for this activity visit:
<http://www.medscape.org/viewarticle/859357>**

CME/CE Information

CME/CE Released: 03/24/2016 ; Valid for credit through 03/24/2017

Target Audience

This article is intended for primary care clinicians, neurologists, anesthesiologists, critical care specialists, emergency medicine specialists, obstetrician-gynecologists, general surgeons, nurses, pharmacists, public health officials, and other members of the healthcare team involved in the care of patients with postoperative pain.

Goal

The goal of this activity is to provide medical news to primary care clinicians and other healthcare professionals in order to enhance patient care.

Learning Objectives

Upon completion of this activity, participants will be able to:

1. Describe recommendations regarding multimodal, patient-specific, and procedure-specific treatment of postoperative pain, based on new guidelines issued by the American Pain Society (APS)
 2. Describe other strong recommendations regarding postoperative pain, based on moderate-quality evidence, in the new APS guidelines
-

Credits Available

Physicians - maximum of 0.25 *AMA PRA Category 1 Credit(s)*[™]

Family Physicians - maximum of 0.25 *AAFP Prescribed credit(s)*

Nurses - 0.25 *ANCC Contact Hour(s)* (0.25 contact hours are in the area of pharmacology)

Pharmacists - 0.25 *Knowledge-based ACPE* (0.025 CEUs)

All other healthcare professionals completing continuing education credit for this activity will be issued a certificate of participation.

Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Accreditation Statements

For Physicians



Medscape, LLC is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Medscape, LLC designates this enduring material for a maximum of 0.25 **AMA PRA Category 1 Credit(s)**[™]. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

This Enduring Material activity, Medscape Education Clinical Briefs, has been reviewed and is acceptable for up to 65.00 Prescribed credit(s) by the American Academy of Family Physicians. Term of approval begins 09/01/2015. Term of approval is for one year from this date. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Medscape, LLC staff have disclosed that they have no relevant financial relationships.

[AAFP Accreditation Questions](#)

[Contact This Provider](#)

For Nurses



Medscape, LLC is accredited as a provider of continuing nursing education by the American Nurses Credentialing Center's Commission on Accreditation.

Awarded 0.25 contact hour(s) of continuing nursing education for RNs and APNs; 0.25 contact hours are in the area of pharmacology.

[Contact This Provider](#)

For Pharmacists



Medscape, LLC is accredited by the Accreditation Council for Pharmacy Education as a provider of continuing pharmacy education.

Medscape designates this continuing education activity for 0.25 contact hour(s) (0.025 CEUs) (Universal Activity Number 0461-0000-16-056-H01-P).

[Contact This Provider](#)

For questions regarding the content of this activity, contact the accredited provider for this CME/CE activity noted above. For technical assistance, contact CME@medscape.net

Instructions for Participation and Credit

There are no fees for participating in or receiving credit for this online educational activity. For information on applicability and acceptance of continuing education credit for this activity, please consult your professional licensing board.

This activity is designed to be completed within the time designated on the title page; physicians should claim only those credits that reflect the time actually spent in the activity. To successfully earn credit, participants must complete the activity online during the valid credit period that is noted on the title page. To receive *AMA PRA Category 1 Credit*[™], you must receive a minimum score of 70% on the post-test.

Follow these steps to earn CME/CE credit*:

1. Read the target audience, learning objectives, and author disclosures.
2. Study the educational content online or printed out.
3. Online, choose the best answer to each test question. To receive a certificate, you must receive a passing score as designated at the top of the test. We encourage you to complete the Activity Evaluation to provide feedback for future programming.

You may now view or print the certificate from your CME/CE Tracker. You may print the certificate but you cannot alter it. Credits will be tallied in your CME/CE Tracker and archived for 6 years; at any point within this time period you can print out the tally as well as the certificates from the CME/CE Tracker.

*The credit that you receive is based on your user profile.

Hardware/Software Requirements

To access activities, users will need:

- A computer with an Internet connection.
- Internet Explorer 8.x or higher, the latest versions of Firefox or Safari, or any other W3C standards compliant browser.
- [Adobe Flash Player](#) and/or an HTML5 capable browser may be required for video or audio playback.
- Occasionally other additional software may be required such as [PowerPoint](#) or [Adobe Acrobat Reader](#).



Faculty and Disclosures

As an organization accredited by the ACCME, Medscape, LLC, requires everyone who is in a position to control the content of an education activity to disclose all relevant financial relationships with any commercial interest. The ACCME defines "relevant financial relationships" as financial relationships in any amount, occurring within the past 12 months, including financial relationships of a spouse or life partner, that could create a conflict of interest.

Medscape, LLC, encourages Authors to identify investigational products or off-label uses of products regulated by the US Food and Drug Administration, at first mention and where appropriate in the content.

Author(s)

Pauline Anderson

Freelance writer, Medscape

Disclosure: Pauline Anderson has disclosed no relevant financial relationships.

Editor(s)

Robert Morris, PharmD

Associate CME Clinical Director, Medscape, LLC

Disclosure: Robert Morris, PharmD, has disclosed no relevant financial relationships.

CME Author(s)

Laurie Barclay, MD

Freelance writer and reviewer, Medscape, LLC

Disclosure: Laurie Barclay, MD, has disclosed the following relevant financial relationships:
Owns stock, stock options, or bonds from: Pfizer

CME Reviewer/Nurse Planner

Amy Bernard, MS, BSN, RN-BC

Lead Nurse Planner, Medscape, LLC

Disclosure: Amy Bernard, MS, BSN, RN-BC, has disclosed no relevant financial relationships.

From [Medscape Education Clinical Briefs](#)

New Guidelines Released for Postoperative Pain Management CME/CE

News Author: Pauline Anderson

CME Author: Laurie Barclay, MD

CME/CE Released: 03/24/2016 ; Valid for credit through 03/24/2017

Clinical Context

Acute postoperative pain is common, occurring in more than 80% of patients, with approximately 75% of these having moderate, severe, or extreme pain. Postoperative pain relief is inadequate in more than half of patients, which can negatively affect quality of life, function, and functional recovery, as well as increasing the risks for postsurgical complications and persistent postsurgical pain.

The American Pain Society (APS), in collaboration with the American Society of Anesthesiologists, commissioned an evidence-based guideline on postoperative pain management to promote effective and safer postoperative pain management in children and adults. Topics include preoperative education, perioperative pain management planning, use of different pharmacologic and nonpharmacologic modalities, organizational policies and procedures, and transition to outpatient care.

Synopsis and Perspective

The APS has released a new evidence-based clinical practice guideline that includes 32 recommendations related to postoperative pain management in children and adults.

The guideline is based on the findings of an interdisciplinary expert panel. The APS commissioned the panel with input from the American Society of Anesthesiologists, and the document was subsequently approved by the American Society of Regional Anesthesia and Pain Management.

Research shows that most surgical patients receive inadequate pain relief, which can increase the risks for prolonged postoperative pain, mood disorders, and physical impairment, said lead author Roger Chou, MD, Departments of Medicine and Medical Informatics and Clinical Epidemiology, Oregon Health and Science University, Pacific Northwest Evidence Based Practice Center, Portland.

A key recommendation in the guideline, published in the February issue of the *Journal of Pain*, is wider use of multimodal techniques, Dr Chou told *Medscape Medical News*.

"This means using different medications, for example opioids and nonopioid therapies such as non-steroidal anti-inflammatories (NSAIDs), gabapentin/pregabalin, ketamine, lidocaine, administered in different ways, for example,

systemically or via neuraxial/peripheral regional anesthetic techniques, as well as medications and nonpharmacological therapies."

Multimodal strategies help achieve better pain relief while using lower doses of opioids and potentially fewer adverse effects, by affecting pain via different mechanisms of actions and pathways, added Dr Chou.

The recommendation on individualizing therapy is also critical, said Dr Chou. "The same strategy is not going to be ideal in all patients. For example, in patients who are already on long-term opioid therapy prior to surgery, managing their pain is not going to be the same as someone not on opioids."

The guideline was developed by a 23-member expert panel representing anesthesia, pain management, surgery, nursing, and other medical specialties. It is based on the panel's review of more than 6500 scientific abstracts and primary studies.

The panel rated each recommendation as strong, moderate, or weak and based each on the quality of the scientific evidence. Of the 32 recommendations, the panel rated only 4 as supported by high-quality evidence, and 11 recommendations were based on low-quality evidence. The guideline authors noted that there were "numerous research gaps."

In addition to using multimodal therapies, the 3 other strong recommendations with high-quality evidence included the following:

- Using acetaminophen and/or NSAIDs as part of multimodal analgesia for management of postoperative pain in adults and children without contraindications;
- Considering surgical site-specific peripheral regional anesthetic techniques in adults and children for procedures with evidence indicating efficacy; and
- Offering neuraxial analgesia for major thoracic and abdominal procedures, particularly in patients at risk for cardiac complications or prolonged ileus.

Strong recommendations with moderate-quality evidence included the following:

- Administering oral vs intravenous (IV) opioids in patients who can use the oral route;
- Avoiding the intramuscular route for administration of analgesic;
- Choosing IV patient-controlled analgesia (PCA) when the parenteral route is needed;
- Not using routine basal infusion of opioids with IV PCA in opioid-naive adults;
- Considering a preoperative dose of oral celecoxib in adults without contraindications;
- Considering gabapentin or pregabalin as a component of multimodal analgesia;
- Using topical local analgesics in combination with nerve blocks before circumcision;
- Avoiding intrapleural analgesia with local anesthetics for pain control after thoracic surgery;
- Using continuous, local anesthetic-based peripheral regional analgesic techniques when the need for analgesia is likely to exceed the duration of effect of a single injection; and
- Avoiding the neuraxial administration of magnesium, benzodiazepines, neostigmine, tramadol, and ketamine.

Despite low-quality evidence, the panel strongly recommended that clinicians carry out the following strategies:

- Provide patients with education, including information on treatment options;
- Conduct a preoperative evaluation, including assessment of medical and psychiatric comorbidities, concomitant medications, history of chronic pain, and substance abuse;
- Adjust the pain management plan on the basis of adequacy of pain relief and presence of adverse events;
- Use a validated pain assessment tool to track response to postoperative pain treatments and adjust treatment plans accordingly;
- Appropriately monitor sedation, respiratory status, and other adverse events in patients who receive systemic

opioids; and

- Provide appropriate monitoring of patients who have received neuraxial interventions for perioperative analgesia.

For cognitive behavioral therapy, the panel had a "weak" recommendation based on moderate-quality evidence to consider this technique as part of a multimodal approach.

The panel found that there was insufficient evidence to recommend or discourage acupuncture, massage, or cold therapy as adjuncts to other postoperative pain treatments. For transcutaneous electrical nerve stimulation, the panel had a "weak" recommendation that clinicians consider this treatment.

As evidence increases on newer techniques for managing postoperative pain, it is important to incorporate these techniques into current practice to improve management of postoperative pain, said Dr Chou. He noted that the APS has not previously issued guidelines on management of postoperative pain and recognizes that this as an important area where evidence-based guidelines could help improve clinical practice.

Dr Chou has disclosed no relevant financial relationships.

J Pain. 2016;17:131-157.^[1]

Guideline Highlights

- Currently many preoperative, intraoperative, and postoperative interventions and management strategies are available to reduce and manage postoperative pain.
- Optimal management begins preoperatively with patient evaluation and development of a plan of care specific to each patient and procedure.
- Evidence supports multimodal treatment in many situations, using a variety of analgesic medications and techniques combined with nonpharmacologic interventions, for their synergistic effects and more effective pain relief (strong recommendation; high-quality evidence).
- In multimodal treatment, appropriate monitoring is needed to identify and manage adverse events because of the different adverse effect profile for each analgesic medication or technique used.
- Specific components of effective multimodal care should be tailored to the patient, setting, and surgical procedure (strong recommendation; low-quality evidence).
- Multimodal treatment should include use of around-the-clock acetaminophen and/or NSAIDs for adults and children without contraindications (strong recommendation; high-quality evidence).
- For certain surgical sites, specific peripheral regional anesthetic techniques are effective and should be used in adults and children when appropriate (strong recommendation; high-quality evidence).
- For major thoracic and abdominal surgeries, neuraxial analgesia should be considered, especially in patients at risk for cardiac complications or prolonged ileus (strong recommendation; high-quality evidence).
- Other strong recommendations are supported by moderate-quality evidence.
- Oral opioids are preferred to IV opioids in patients who can tolerate oral administration, because the efficacy of IV is not superior to oral. Because postoperative pain is often continuous initially, it often requires around-the-clock dosing during the first 24 hours. Long-acting oral opioids are generally not recommended in the immediate postoperative period.
- Analgesics should not be administered intramuscularly because intramuscular administration can cause significant pain, absorption is unreliable, and it has no clearly shown advantages vs other routes of administration.
- Patients requiring parenteral analgesia should be given IV PCA.
- Opioid-naïve adults should not receive routine basal opioid infusion using IV PCA.
- Adults without contraindications may benefit from a preoperative dose of oral celecoxib.
- Gabapentin or pregabalin may be a suitable intervention in multimodal analgesia.
- Topical local analgesics combined with nerve blocks may be useful before circumcision.

- Intrapleural analgesia with local anesthetics is not recommended for pain control after thoracic surgery.
- When the need for analgesia is likely to be longer than a single injection can provide, continuous, local anesthetic-based peripheral regional analgesic techniques are recommended.
- Neuraxial administration of magnesium, benzodiazepines, neostigmine, tramadol, and ketamine is not recommended.
- Numerous research gaps still exist, as indicated in the systematic review underlying these guidelines.
- Only 4 of 32 recommendations were supported by high-quality evidence, and 11 (regarding patient education, perioperative planning, patient evaluation, organizational structures and policies, and transitioning to outpatient care) were based on low-quality evidence.

Clinical Implications

- The APS has issued guidelines for postoperative pain management, recommending multimodal regimens tailored to the specific patient and procedure.
- Other strong recommendations for postoperative pain management were supported by moderate-quality evidence, including preference for oral to IV opioids when feasible and avoidance of intramuscular administration.
- Implications for the Healthcare Team: Members of the healthcare team should be aware that numerous research gaps still exist, and only 4 of 32 recommendations were supported by high-quality evidence.

CME Test

To receive *AMA PRA Category 1 Credit™*, you must receive a minimum score of 75% on the post-test.

You are a member of the healthcare team for a 57-year-old man undergoing abdominal surgery. According to the new APS guidelines on postoperative pain by Chou and colleagues, which of the following statements about recommendations regarding multimodal, patient-specific, and procedure-specific treatment of postoperative pain is *correct*?

- NSAIDs should be avoided because of gastrointestinal effects
- Acetaminophen should be given only as needed
- Specific peripheral regional anesthetic techniques are recommended only in adults, when appropriate
- Neuraxial analgesia should be considered for major thoracic and abdominal surgeries, especially in patients at risk for cardiac complications or prolonged ileus

According to the new APS guidelines on postoperative pain by Chou and colleagues, which of the following statements about strong recommendations supported by moderate-quality evidence is *correct*?

- IV opioids are preferred to oral opioids because they are more effective
- During the first 24 hours after surgery, patients should receive long-acting oral opioids
- Patients requiring parenteral analgesia should be given IV PCA
- Intrapleural analgesia with local anesthetics is recommended for pain control after thoracic surgery

Save and Proceed

**This article is a CME/CE certified activity. To earn credit for this activity visit:
<http://www.medscape.org/viewarticle/859357>**

References

1. Chou R, Gordon DB, de Leon-Casasola OA, et al. Management of postoperative pain: a clinical practice guideline from the American Pain Society, the American Society of Regional Anesthesia and Pain Medicine, and the American Society of Anesthesiologists' Committee on Regional Anesthesia, Executive Committee, and Administrative Council. *J Pain*. 2016;17:131-157. <http://www.jpain.org/article/S1526-5900%2815%2900995-5/abstract>. Accessed February 26, 2016.

Disclaimer

The educational activity presented above may involve simulated case-based scenarios. The patients depicted in these scenarios are fictitious and no association with any actual patient is intended or should be inferred.

The material presented here does not necessarily reflect the views of Medscape, LLC, or companies that support educational programming on [medscape.org](http://www.medscape.org). These materials may discuss therapeutic products that have not been approved by the US Food and Drug Administration and off-label uses of approved products. A qualified healthcare professional should be consulted before using any therapeutic product discussed. Readers should verify all information and data before treating patients or employing any therapies described in this educational activity.

Medscape Education © 2016 Medscape, LLC

**This article is a CME/CE certified activity. To earn credit for this activity visit:
<http://www.medscape.org/viewarticle/859357>**

This website uses cookies to deliver its services as described in our [Cookie Policy](#). By using this website, you agree to the use of cookies.

[close](#)