



Synergistic Pain Control through Combined Therapeutic Strategies

Milica Bulat *

Department of Anesthesiology and Pain Medicine, University of Belgrade Faculty of Medicine, Belgrade, Serbia

DESCRIPTION

Pain remains one of the most common reasons individuals seek medical attention and continues to influence recovery, physical function, emotional well-being, and quality of life. Pain can emerge from surgical procedures, injuries, inflammatory conditions, nerve damage, cancer-related conditions, and chronic disorders. While a single therapeutic method may reduce symptoms in certain cases, many patients experience incomplete relief when one intervention is used in isolation. Variations in pain intensity, patient physiology, and disease characteristics often influence treatment outcomes. For this reason, combined therapeutic strategies have gained increasing attention in pain management practice. Synergistic pain control refers to the use of multiple therapeutic methods that act together to provide greater pain relief than would be expected from a single intervention alone.

Pain is a complex biological process involving communication among peripheral tissues, the spinal cord, and the central nervous system. Signals generated from tissue damage or nerve irritation travel through specialized pathways to the brain where the sensation of pain is interpreted. Psychological factors, environmental influences, previous experiences, and individual sensitivity also contribute to how pain is perceived. Since numerous mechanisms participate in the pain process, treatment plans directed toward several pathways simultaneously can produce improved outcomes.

Combined therapeutic strategies often involve the use of medications with different mechanisms of action. Traditional pain management frequently relied heavily on opioid medications because of their strong analgesic effects. Although opioids remain useful for many situations, long-term or excessive use may lead to complications such as dependence, sedation, respiratory suppression, nausea, and constipation. Concerns regarding opioid-related complications have encouraged healthcare professionals to consider approaches that reduce dependence on a single drug class.

Multimodal analgesia represents an important example of synergistic pain control. In this method, clinicians combine different medications that act at separate sites within the pain pathway. Nonsteroidal anti-inflammatory drugs reduce the production of inflammatory substances that contribute to pain and swelling. Acetaminophen acts through central mechanisms to reduce discomfort and fever. Local anesthetics interrupt nerve signal transmission at specific locations. Anticonvulsants and antidepressant medications may assist in controlling neuropathic pain by influencing neurotransmitter activity within the nervous system. When these agents are used together in appropriate combinations, pain reduction may be achieved while minimizing the required dosage of individual drugs.

Surgical care provides an excellent illustration of how combined methods improve patient outcomes. During perioperative management, anesthesiologists frequently administer different medications before, during, and after surgery to reduce pain from multiple directions. A patient undergoing orthopedic surgery may receive anti-inflammatory medication before the procedure, regional anesthesia during surgery, and non-opioid analgesics following the operation. This combination may decrease pain intensity, shorten recovery time, improve mobility, and reduce opioid exposure.

CONCLUSION

The future direction of pain management may continue moving toward integrated strategies that unite pharmacological methods, procedural interventions, rehabilitation practices, psychological support, and technological developments. Such coordinated methods acknowledge the multifactorial nature of pain and support a broader perspective in clinical care. Through careful selection of complementary interventions, healthcare professionals can improve patient experiences and support meaningful recovery across a wide range of clinical situations.

Correspondence to: Milica Bulat, Department of Anesthesiology and Pain Medicine, University of Belgrade Faculty of Medicine, Belgrade, Serbia, E-mail: milica.bulat@medmail.org

Received: 27-Jan-2026, Manuscript No. JPMME-26-31486; **Editor assigned:** 30-Jan-2026, Pre QC No. JPMME-26-31486; **Reviewed:** 13-Feb-2026, QC No. JPMME-26-31486; **Revised:** 20-Feb-2026, Manuscript No. JPMME-26-31486; **Published:** 27-Feb-2026, DOI: 10.35248/2684-1320.26.12.366

Citation: Bulat M (2026). Synergistic Pain Control through Combined Therapeutic Strategies. *J Pain Manage Med.* 12:366.

Copyright: © 2026 Bulat M. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

REFERENCES

1. Cai L, Cai Y, Yu R, Song A, Yang C, Yang W, et al. Synergistic analgesic effects of anaesthesia combined with celecoxib on a mouse bone cancer pain model: From behavioural validation to target prediction. *Int Immunopharmacol.* 2025;166:115564.
2. Patra RC, Garg DA, Yashudas A. Modulating cortical excitability through transcranial direct current stimulation combined with therapeutic exercise for craniofacial myofascial pain: Randomized controlled trial. *J Oral Biol Craniofac Res.* 2025;15(6):1731-1741.
3. Majumdar S, Samaiya PK, Gupta SK, Krishnamurthy S, Prajapati SK. Aging and neuropathic pain: Mitochondria-to-glia cascade, system mechanisms, and therapeutic strategies. *Ageing Res Res.* 2026;116:103042.
4. Avinash G, Sunder S, Solomon P, Deep A, Srikanth I, Barathi A, et al. Efficacy of platelet rich plasma injection as an combined modality in reducing pain and improving functional outcome in plantar fasciitis-a randomized control trial. *J Orthop Rep.* 2026;100908.
5. Sahoo S, Verma N, Chouhan D, Tiwari V. Beyond the High: Therapeutic Insights into Cannabis Sattva and Endocannabinoid Control of Pain. *Pharmacological Research-Natural Products.* 2026;100589.
6. Han X, Zhao X, Ge Y, Wang B, Shang X, Lu Z, et al. Sleep Management Combined with Rehabilitation Exercise to Alleviate Chronic Pain Following Total Knee Arthroplasty: A Randomized Controlled Trial. *J Arthroplasty.* 2025.
7. Pulone S, Moulton C, Nucera S, Ilari S, Muscoli C, Tasciotti E. Therapeutic Use of Cannabinoids in Age-Related Pain: Current Evidence and Clinical Perspectives. *Pharmacol Res.* 2026:108130.
8. Qin PP, Wei K, Zou BY, Liu D, Li MX, Liu XN, et al. Effectiveness of transcutaneous electrical acupoint stimulation combined with press needle therapy for pain control after caesarean section: A randomized controlled trial. *J Integr Med.* 2025.
9. Aramini A, Bianchini G, Lillini S, Tomassetti M, Pacchiarotti N, Canestrari D, et al. Ketoprofen, lysine and gabapentin co-crystal magnifies synergistic efficacy and tolerability of the constituent drugs: Pre-clinical evidences towards an innovative therapeutic approach for neuroinflammatory pain. *Biomed Pharmacother.* 2023;163:114845.
10. Fu L, Yang Y, Ma Y, Wang Y, Tang P, Liu J, et al. Autophagy in neuropathic pain: Cell specificity, molecular mechanisms, and therapeutic prospects. *J Holist Integr Pharm.* 2026;7(1):127-135.