

# Pain and Neuromodulation

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## Dear Editor,

Pain is the most common and well-known complaint of patients. History and literature of medicine is full of various diagnostic and therapeutic methods for pain management, and physicians' competencies had been measured by their success in reducing pain. Throughout the written history of mankind, the description of complaints about pain and how to treat them has always had a special place. Even poets and philosophers used pain and its effects in expressing their romantic and mystical descriptions. With the advent of modern medicine and increased understanding of human anatomy and physiology, the view of scientists regarding pain has changed. The topics of neurophysiology, neuroanatomy, and pharmacology, along with biochemistry and radiology, have played an absolutely valuable role in the recognition and treatment of pain in recent decades. Physical measures, such as heat, cold, pressure, and massage, as well as plant and animal components, have been used for pain management. The advent of chemical drugs following physiology, biochemistry, and pharmacology was a major revolution in overcoming chronic pain. The growth and branching of medical specialties and the orientation of these trends have provided a background for the emergence of specific disciplines related to pain. Specialized disciplines such as anesthesia, physical medicine and rehabilitation, neurosurgery, neurology, and psychiatry have begun supplementary and subspecialty pain courses since the late seventies and early eighties. Among the effective and growing measures in the treatment of pain are interventional methods and the use of neuromodulation and surgical procedures. The International Neuromodulation Society defines therapeutic neuromodulation as "the alteration of nerve activity through the targeted delivery of a stimulus, such as electrical stimulation or chemical agents, to specific neurological sites in the body".

Another form of neuromodulation is the intrathecal pump, which is a device designed to deliver a desired medication directly into the spinal fluid surrounding the

spinal cord. Intrathecal pump is used to deliver specific medicines, such as spasmolytics and analgesic opioids, directly to target tissues (1). Interventional pain management means any therapeutic application to deliver drugs and/or medical devices to target organs. Interventional measures are required during additional training courses after passing the specialization courses in the fields of anesthesia, physical medicine and rehabilitation, neurosurgery, neurology, and radiology. Several neuromodulation methods can be used with interventional measures.

Timely and appropriate application of interventional and neuromodulation measures can reduce disability and pain, especially in cases where pain is resistant to conventional methods. The combination of conservative measures, physical medicine, rehabilitation, drugs, and interventional and neuromodulation methods, along with cognitive therapy has the highest effect on reducing pain and its complications. Emphasizing the rational use and scientific application of interventional and neuromodulation methods, this journal announces its readiness to publish scientific articles in the field of pain with an emphasis on interventional and neuromodulation measures.

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## References

1. Pain and neuromodulation: What's all the "buzz" about? Harvard Health Blog; 2020.