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## Epigenetics of chronic pain after thoracic surgery.

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### Abstract

**PURPOSE OF REVIEW:** Chronic pain after surgery is a major public health problem and a major concern for perioperative physicians. Thoracic surgery presents a unique challenge, as thoracotomy is among the highest risk surgeries to develop persistent postsurgical pain. The purpose of this review is to discuss the relevance of research in pain epigenetics to patients with persistent pain after thoracic surgery.

**RECENT FINDINGS:** Recent advances have linked chronic pain states to genetic and epigenetic changes. Progress in our understanding of chronic pain has highlighted the importance of immune modulation of pain. It is possible that epigenetic changes driving chronic pain occur in the perioperative setting via histone modification and DNA methylation.

**SUMMARY:** The transition from acute to chronic pain after thoracic surgery may be mediated by epigenetics. Here, we discuss epigenetic modifications that have been discovered in animal models of chronic pain that may predispose patients to persistent neuropathic pain after thoracic surgery.

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