

**INTRODUCTION:** In attempt to prolong the effects of bupivacaine, liposomal bupivacaine (LB) was developed as an extended-release formulation capable of providing pain relief for up to 72 hours and has been used across a variety of plastic surgery procedures. The objective of this review is to evaluate the current literature on the use of liposomal bupivacaine in abdominoplasty and to assess its impact on postoperative recovery.

**METHODS:** A scoping review in line with the PRISMA-ScR guidelines was conducted across 5 databases (PubMed, Embase, CINAHL, Cochrane Library, Web of Science) using an iteratively developed search strategy with the assistance of a medical librarian. Search terms included concepts related to plastic surgery, body contouring procedures, and liposomal bupivacaine. A total of 1130 articles were identified, of which 8 met eligibility criteria. Two reviewers independently screened articles, and conflicts were resolved by discussion. Included studies were reviewed and synthesized qualitatively.

**RESULTS:** Eight studies evaluating LB in abdominoplasty were included. LB was administered via local infiltration, field block, or transversus abdominis plane block, often as part of a multimodal analgesic regimen or enhanced recovery after surgery (ERAS) protocol. Early studies assessing LB via local infiltration demonstrated improved postoperative pain control and reduced opioid consumption. A later comparative study supported these findings with significantly lower opioid requirements in patients receiving LB compared to continuous infusion pain pumps with bupivacaine. Studies evaluating LB administered via TAP block reported low postoperative pain scores, minimal opioid use, and rapid transition to non-opioid analgesics. Additionally, incorporating LB as part of a larger ERAS-based approach substantially reduced opioid prescribing while maintaining acceptable postoperative pain control compared to traditional protocols. However, a recent randomized controlled trial comparing LB and traditional agents showed no significant difference in postoperative pain scores at any time point in postoperative recovery.

**DISCUSSION:** Overall, LB use has largely been associated with improved pain control and opioid-sparing effects in the context of abdominoplasty and other body contouring procedures, particularly within multimodal analgesia strategies. However, the current body of literature remains limited, and many studies supporting the use of LB are observational in design without control groups.