

# **Analgesic Outcomes of Liposomal Bupivacaine in Abdominoplasty and Related Body Contouring Procedures: A Scoping Review**

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## **Abstract**

**BACKGROUND:** Body contouring surgery is among the most painful elective procedures in plastic surgery and has been traditionally managed with systemic opioids. Liposomal bupivacaine (LB) is an extended-release local anesthetic providing analgesia for 72 to 96 hours that has been increasingly adopted as an opioid-sparing strategy. Despite widespread use, the evidence supporting the use of LB in body contouring remains poorly characterized.

**OBJECTIVES:** To map the existing literature on the use of LB in abdominoplasty and related body contouring procedures and characterize available evidence on postoperative outcomes such as pain scores, opioid consumption, functional recovery.

**MATERIAL AND METHODS:** A scoping review was performed following PRISMA-ScR guidelines. Five databases and Google Scholar were searched in February 2026. Studies evaluating LB in body contouring procedures with reported pain, opioid, or functional recovery outcomes were included.

**RESULTS:** Six retrospective studies were included, with sample sizes ranging from 13 to 202 patients. Procedures included abdominoplasty and related body contouring. Across studies, most patients reported low pain scores, though scores were measured on non-equivalent scales (VAS, 10-point NRS, and an 11-point NRS). The sole comparative study demonstrated lower 48-hour opioid consumption with LB versus continuous bupivacaine infusion (14.96 vs 33.83 MME;  $P=0.003$ ). Early ambulation was associated with the use of LB but inconsistently reported.

**CONCLUSIONS:** LB is associated with favorable analgesic outcomes in body contouring surgery; however, the evidence is limited to small retrospective studies with heterogeneous protocols and no randomized controlled comparisons. Prospective trials with standardized outcome measures relevant to the outpatient aesthetic population are needed before evidence-based recommendations can be established.