

TRANSVERSUS ABDOMINIS PLANE BLOCK IN BARIATRIC SURGERY

A Systematic Review of Local Anesthetic Choice, Dosing, Technique, and Analgesic Outcomes

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Background

- Effective postoperative analgesia is critical in bariatric surgery and reduces opioid-related complications
- TAP block proposed as part of multimodal analgesia but clinical efficacy in bariatrics remains debated
- Our objective was to systematically review the TAP block efficacy and safety in bariatric surgery.

Methods



Databases searched
for studies analyzing
TAP Block in Bariatric
Surgery



Primary outcomes

- Local anesthetic type, concentration, volume
- Opioid consumption (MME)
- Pain scores (VAS/NRS)
- Rescue analgesia
- PONV
- Length of Hospital Stay

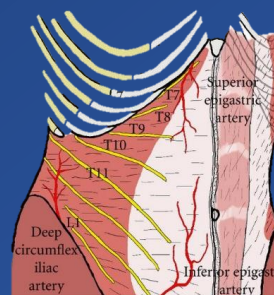
32 Clinical studies included > **30,000** patients

Local Anesthetic Used:

- Ropivacaine (~71%; 0.2–0.375%)
- Bupivacaine (~14%; 0.25%)
- Liposomal bupivacaine (~14%)

Volume Per Side

- 20 mL (40%)
- 30 mL (60%)



T6-T9 = Most common block levels

Summary of Findings

Category	Findings
Most Common Local Anesthetic	Ropivacaine (~71%; 0.2–0.375%)
Other Agents	Bupivacaine (~14%); Liposomal bupivacaine (~14%)
Volume – 20 mL/side	Short-lived pain reduction
Volume – 30 mL/side	Improved early pain (0–12h)
Ultrasound-Guided TAP	Lower inpatient MME
Laparoscopic TAP	Common intraoperative technique
Compared to ESP/QLB	TAP inferior in several trials
Compared to IV Lidocaine	TAP often inferior at 12–24h

Higher Volume (30 mL/Side) Improves Early Pain

- 20 mL/side → modest, short-lived
- 30 mL/side → consistent improvement (0–12h)
- Opioid reduction at 24h remained variable

TAP Provides Modest Benefit Compared to Alternative Strategies

- Ultrasound-guided TAP = lower inpatient MME
- ESP block, QLB, and IV lidocaine are frequently superior opioid-sparing and/or longer analgesia

MAIN FINDINGS

Conclusion

- TAP block is **safe and feasible**, with no major block-related complications reported in most studies.
- Provides:
 - Modest opioid-sparing
 - Early pain reduction
- Benefits are more consistent with:
 - Ultrasound guidance
 - Higher anesthetic volumes
 Role within ERAS protocols remains uncertain
- Standardization and high-quality RCTs are needed

References

- Complete list of references can be assessed by the following QR code:

