# Diaphragm-sparing nerve blocks for shoulder surgery

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 Shoulder surgery can result in significant postoperative pain. Interscalene brachial plexus blocks (ISBs) constitute the current criterion standard for analgesia but may be contraindicated in patients with pulmonary pathology due to the inherent risk of phrenic nerve block and symptomatic hemidiaphragmatic paralysis. Although ultrasound-guided ISB with small volumes (5 mL), dilute local anesthetic (LA) concentrations, and LA injection 4 mm lateral to the brachial plexus have been shown to reduce the risk of phrenic nerve block, no single intervention can decrease its incidence below 20%. Ultrasound-guided supraclavicular blocks with LA injection posterolateral to the brachial plexus may anesthetize the shoulder without incidental diaphragmatic dysfunction, but further confirmatory trials are required. Ultrasound-guided C7 root blocks also seem to offer an attractive, diaphragm-sparing alternative to ISB. How