

Chronic Pain in Pregnancy: Implications for Labour Outcomes and Peripartum Anesthetic Management

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Background

- Pregnancy-related and non-obstetric chronic pain syndromes are common and present challenges for peripartum anesthetic care.
- Chronic pain may amplify labour pain and impact labour outcomes, yet underlying mechanisms remain poorly understood with limited clinical guidance.

This review examined the impact of chronic pain in pregnancy on:

- Delivery mode
- Peripartum analgesia use and anesthetic management
- Anesthetic complications

Hypothesis

We **hypothesized** that chronic pain in pregnancy increases cesarean section (CS) rates, increases peripartum analgesic requirements, and complicates neuraxial anesthesia.

Study Design and Methods

Framework: Literature review

Databases: Ovid, PubMed, Embase, and Cochrane

Inclusion criteria:

- ☐ Fully published human studies
- ☐ Persistent pain ≥ 3 months during pregnancy
- ☐ Reported labour or delivery outcome

Exclusion criteria:

- ☐ Acute pain studies
- ☐ Non-English studies
- ☐ Animal studies

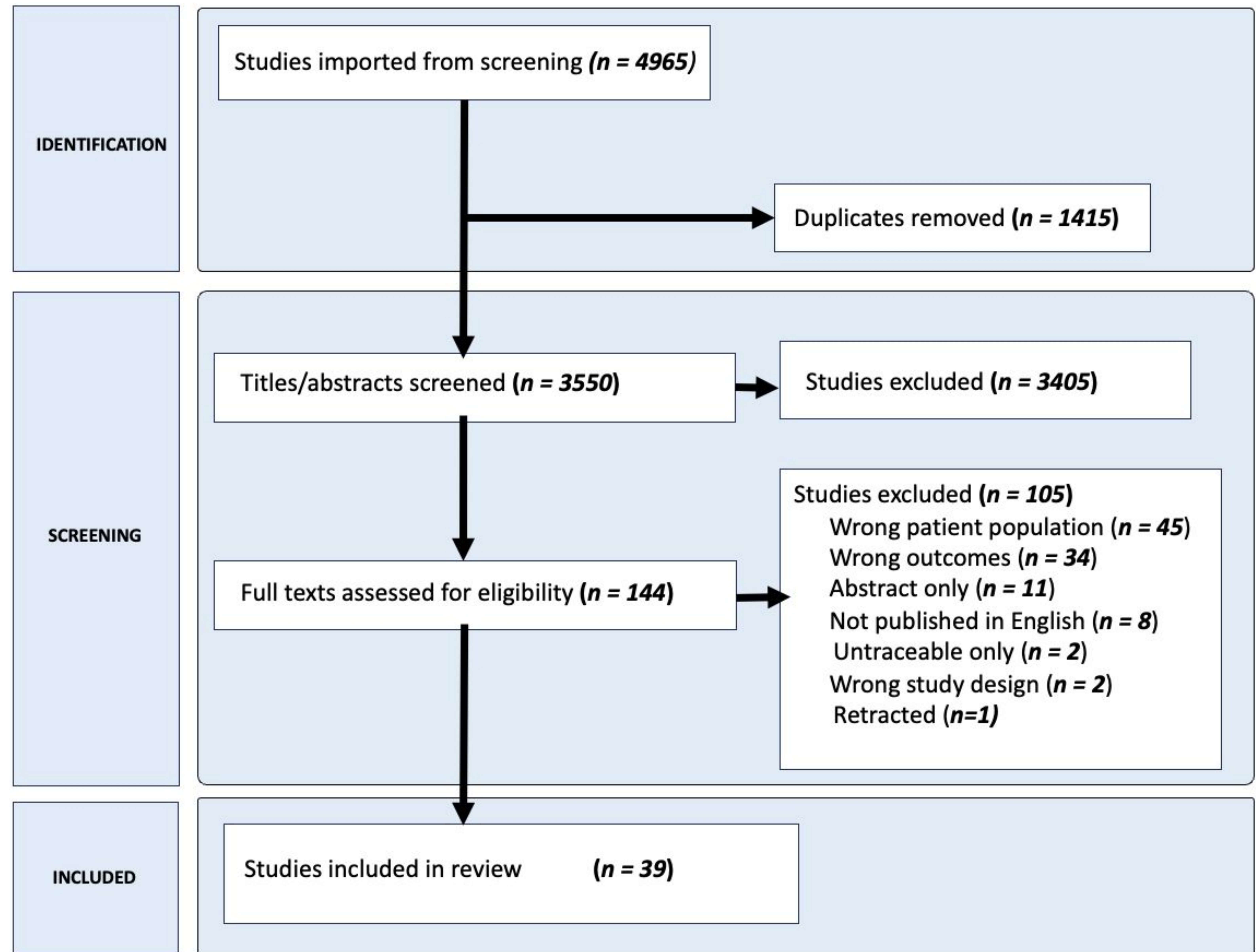


Figure 1. PRISMA flow diagram of the study

Summary of Results

Legend

- = Favorable / Preferred
- = Consideration / Nuance
- = Risk / Caution
- = System / Gap / Barrier

Domain	Outcome	Chronic Pain Subtypes	Summary / Comments
Anesthesia/ Analgesia Modality	General Anesthesia (CS)	LBP, pelvic pain, spinal conditions N = 4 studies	● Failed neuraxial / preference / high-risk spine → GA used . ● Avoids neuraxial neurologic risk → useful in implants, stenosis, limited access .
	Spinal Anesthesia (CS)	Scoliosis, spinal fusion N = 4 studies	● Often more reliable > epidural (post-fusion). ● US guidance → ↑ midline identification + depth accuracy . ● Review imaging → ↓ hardware/device injury. ● ITP/SCS : not contraindicated → need imaging/US; ● practice is variable. ● ITP not for labour analgesia (maintain baseline infusion).
	Epidural (CS & Vaginal)	LBP, fibromyalgia, SCS, stenosis N = 7 studies	● Preferred > systemic opioids (efficacy/safety). ● ↑ prenatal pain → ↑ requests + dosing. ● AIS (long fusion) : ↑ difficulty/time, ↑ CSE; failure low (~12%), complications rare. ● Barrier : provider refusal > true infeasibility. ● Spine pathology : possible neuro exacerbation ⚠ but often feasible; ● MRI helpful .
	Analgesic Strategy (Labor & Postpartum)	LBP, fibromyalgia, CRPS, opioid-dependent N = 3 studies	Tolerance/hyperalgesia → ↑ opioid needs . ● Adjuncts: fentanyl PCA, TAP block (±), methadone → opioid-sparing. ● Avoid : agonist-antagonists / withdrawal ⚠ (fetal risk). ● Multidisciplinary planning essential . ● Postpartum: acetaminophen + NSAIDs 1st line; ↓ opioids. ● No clear guidelines → need structured plans .
	Anesthetic Challenges	Neuraxial Complications / Difficulty	● Altered anatomy → ↑ technical difficulty ; landmarks unreliable. ● ↑ risk: dural puncture, false LOR, multiple attempts, patchy/failed block. ● Document baseline neuro findings + pain .
		Inadequate Analgesia	● Pre-existing pain → ↑ analgesic needs . ● Severe prenatal pain → ↑ labor duration + ↑ postop opioids. ● Mitigation : early anesthesia involvement + individualized plans + opioid optimization.

CONCLUSION AND DISCUSSION

Chronic pain in pregnancy may affect

- Delivery planning
- Neuraxial technical difficulty
- Analgesic requirements

Some studies suggest **increased rates of cesarean section**, though findings vary by pain subtype and data are limited. Most common cited reasons include dystocia, limited positioning, fetal distress, and prevention of neurologic deterioration.

Despite challenges, neuraxial anesthesia remains feasible in some patients with appropriate assessment and technique

Clinical implications include:

- Early anesthetic consultation
- Review of spinal imaging when available
- Multidisciplinary planning (obstetrics, anesthesia, pain specialists)

Overall: *Proactive* and *individualized* peripartum planning may optimize analgesia and maternal-neonatal outcomes.