



## Taking the “ouch” out of IUD insertion: Can topical lidocaine help?

### CLINICAL QUESTION

**Does topical lidocaine decrease pain during tenaculum placement and intra-uterine device (IUD) insertion?**

### BOTTOM LINE

**Topical lidocaine-prilocaine 2.5% cream reduces pain with tenaculum placement and copper/levonorgesterel IUD insertion by about 2-3 points more than placebo on a 10-point scale. Lidocaine spray reduces the proportion of women experiencing moderate/severe pain to 6% versus 41% on placebo, but ~55% experience vaginal irritation. Topical lidocaine 2% is likely ineffective.**

### EVIDENCE

- Results statistically different unless indicated. Scores reported on 10-point scale (lower=better). Mostly multiparous women.
- Topical lidocaine-prilocaine (example: EMLA® 5% cream 2mL applied with cotton swab 5 minutes before procedure) versus placebo:
  - Systematic review [2 randomized, controlled trials (RCTs), 212 women]:<sup>1-2</sup>
    - Pain (tenaculum placement), mean difference: 2.3-2.8 points better than placebo.
    - Pain (copper-IUD insertion), mean difference: 2-2.8 points better than placebo.
  - Additional RCT, 140 women:<sup>3</sup>
    - Mean pain (tenaculum placement): 3 versus 4.5 (placebo).

- Mean pain (levonorgestrel-IUD insertion): 2.1 versus 3.7 (placebo).
  - Patient satisfaction (10-point scale, higher=better): 8.4 versus 6.5 (placebo).
  - Vaginal irritation not reported.
- Lidocaine 10% spray (example: 4 puffs to cervix 3 minutes prior to procedure) versus placebo:
  - RCT, 200 women:<sup>4</sup>
    - Median pain during “procedure” (copper-IUD): 1 versus 3 (placebo).
    - Proportion of women with pain score $\geq$ 4: 6% versus 41% (placebo), Number Needed to Treat (NNT)=3.
  - RCT, 124 women:<sup>5</sup>
    - Mean pain (tenaculum placement): 0.8 versus 2.4 (placebo).
    - Mean pain (copper-IUD insertion): 3 versus 5 (placebo).
    - Proportion of women with pain score $\geq$ 4 (IUD insertion): 39% versus 61% (placebo), NNT=5.
    - Vaginal irritation: 55% versus 1.6%.
- Topical lidocaine 2% (various methods/sites, example: cotton swab, angiocatheter) versus placebo:
  - Systematic review (2-3 RCTs, 345-409 women),<sup>2</sup> additional RCTs (59-220 women):<sup>6-9</sup> tenaculum placement/IUD insertion pain: no difference. Exception: pain during tenaculum placement 3.2 versus 5.6 (placebo) in 1 RCT (59 women).<sup>9</sup>
    - Adverse events: No difference. Vaginal irritation: Not reported.

## CONTEXT

- NSAIDs, misoprostol, inhaled nitric oxide, topical nitroprusside or topical nitroglycerin: inconsistent to no effect.<sup>1,2</sup> Paracervical block: Mixed results, injection itself painful.<sup>6</sup> Methoxyflurane: Not studied for IUDs.<sup>10</sup>
- Guidelines support topical lidocaine-prilocaine, but do not mention lidocaine spray.<sup>11</sup>
- Minimum clinically important difference for pain is 1.3-2 (10-point scale).<sup>8</sup>

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## AUTHORS

**Émérie Braschi**, MD PhD CCFP  
**Sanja Kostov**, MD CCFP FCFP,  
**Jessica Kirkwood**, MD CCFP  
 (AM)

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