

# FPIN's Help Desk Answers

## Pain Medications Before IUD Placement

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### Clinical Question

Do preprocedure medications affect the pain of intrauterine device (IUD) insertion?

### Evidence-Based Answer

Topical lidocaine preparations including gels, creams, and sprays may modestly decrease pain with tenaculum placement but not during IUD insertion. (Strength of Recommendation [SOR]: A, based on a meta-analysis of randomized controlled trials [RCTs].) The use of a paracervical block with unbuffered lidocaine does not decrease pain with either step. (SOR: A, based on a meta-analysis of RCTs.) However, a paracervical block using buffered lidocaine may decrease pain with uterine sounding and IUD placement, as well as overall pain. (SOR: B, based on an RCT.) Tramadol and naproxen decrease pain with IUD placement. (SOR: A, based on a meta-analysis of RCTs.)

### Summary

A 2018 meta-analysis of 11 RCTs (N = 1,458) evaluated the effects of a paracervical lidocaine block or application of lidocaine to the genital mucosa before IUD insertion in nulliparous and parous women.<sup>1</sup> Copper IUDs and the levonorgestrel-releasing intrauterine system (Mirena) were used. Pain was assessed using a 0- to 10-point visual analog scale, with higher numbers indicating more pain. A lidocaine preparation of 2.5% gel (three trials) or 2.5% cream (one trial), or a combination of 2.5% lidocaine and 2.5% prilocaine

cream (two trials) was applied to the ectocervix, in the cervical canal, or both. Lidocaine 10% spray (two trials) was applied as four pumps (40 mg) to the ectocervix, and paracervical blocks (four trials) were performed as unbuffered 1% lidocaine injections on either side of the cervix and at the tenaculum site. Control interventions were placebo or no intervention. As a group, genital mucosa lidocaine applications reduced pain with tenaculum placement (six trials; n = 764; mean difference [MD] = -1.0; 95% CI, -1.9 to -0.09) compared with placebo or no intervention, but there was no significant difference with IUD insertion (seven trials; n = 828; MD = -1.0; 95% CI, -2.0 to 0.01). There was no difference in pain with tenaculum placement or IUD insertion when paracervical lidocaine blocks were compared with no intervention (four trials; n = 310; MD = -0.99; 95% CI, -2.4 to 0.42 and MD = -1.7; 95% CI, -3.7 to 0.41, respectively).

A 2018 RCT of 64 nulliparous women compared paracervical block with 20 mL of buffered 1% lidocaine with no block for pain during IUD placement.<sup>2</sup> Pain was measured with speculum placement, tenaculum placement, and IUD placement, then five minutes after the procedure; overall pain perception was rated on a 0- to 100-mm visual analog scale. Paracervical block at the tenaculum site and at the 4 and 8 o'clock positions reduced pain compared with no block during uterine sounding (30 vs. 47 mm;  $P = .005$ ) and IUD placement (33 vs. 54 mm;  $P = .002$ ), at five minutes postprocedure (12 vs. 27 mm;  $P = .005$ ),

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and overall (30 vs. 51 mm;  $P = .015$ ). There was no difference in pain with speculum insertion or tenaculum placement.

A 2015 meta-analysis of 33 RCTs ( $N = 5,710$ ) also evaluated interventions for pain control with IUD insertion.<sup>3</sup> Many of the trials evaluating lidocaine preparations were included in the 2018 meta-analysis, but this meta-analysis also included oral medications (tramadol, naproxen, and ibuprofen); misoprostol (Cytotec; sublingual, buccal, and intravaginal); and intracervical nitroprusside gel (Nitropress) in addition to nonpharmacologic interventions. Pain was assessed on a 0- to 10-point visual analog scale, with higher scores indicating more pain. Copper IUDs and the levonorgestrel-releasing intrauterine system were used. Tramadol, 50 mg orally, reduced IUD insertion pain more than naproxen, 550 mg orally, when given one hour before IUD placement in multiparous women (one trial;  $n = 69$ ; MD =  $-0.63$ ; 95% CI,  $-0.94$  to  $-0.32$ ). Naproxen, 550 mg orally, given one hour before the procedure reduced pain compared with

placebo in multiparous women (two trials;  $n = 153$ ; MD =  $-1.9$ ; 95% CI,  $-2.4$  to  $-1.5$ ). In four trials, ibuprofen was no more effective than placebo in reducing IUD insertion pain. Neither misoprostol, 400 mcg (four trials;  $n = 400$ ), nor nitroprusside gel, 10 mg (two trials;  $n = 47$ ), reduced pain with IUD insertion compared with placebo.

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