

What Works for Needle Fear



Helpful tips to reduce needle pain & anxiety.



Taking the Sting Out of Shots!®
PainCareLabs.com



Magic Tricks for Needle Sticks

Proven techniques make procedures “magically” better! Use these tips before, during, and after a procedure to make the experience a positive one.

Before Procedure: Provide an age-appropriate explanation of what will happen for the child. Give a chance to ask questions. Language matters:

- Use the words **bother**, **tight squeeze**, or **pressure** in place of **hurt**, **sting**, **shot/needle**
- If asked “Will it hurt?” be honest and calm. Say:
 - It’s probably not going to be that big a deal for you.
 - Let’s make a plan to make it more comfortable.
 - The tight squeeze may not be fun, but that part is so short. It may not even bother you.

During Procedure: Immediately effective interventions include letting children sit in a “position of comfort” on a parent’s lap and using distractions.

- **Positions of comfort:** Face the child toward the parent, sitting on the lap. For an IV, rest the child’s arm on the exam table while the parent gives them a hug. For shots, face a child sideways in the parent’s lap, so the shot arm can be relaxed. When parents secure the child, the child feels more secure.
- **Don’t apologize!** Apologizing and empathizing (“I’m sorry, it’s okay honey, I know...”) ironically increase distress.



Magic Tricks for Needle Sticks

Distraction with Props:

- 🌀 Blow bubbles, pinwheels, or a kazoo.
- 🌀 Count things on wallpaper or bright pictures (or use DistrACTION® Cards).
- 🌀 Have the child focus on the vibration or ice pack from Buzzy® or draw attention away from the procedure.

Distraction without Props:

- 🌀 Color Cloud - the child holds a big breath, then imagines breathing a color out during the procedure. Try aiming at held up fingers or imaginary targets!
- 🌀 Touch or tickle the uninvolved arm. Direct the child to concentrate on these sensations.
- 🌀 Tell a story with child-given details: What color is the castle, what kind of animal, what dessert is on the King's table?
- 🌀 Count anything - dots, ceiling tiles, letters in a sign.

After Procedure:

- 🌀 Praise the child no matter what!
- 🌀 More detailed instructions can be found on [PainCareLabs.com](https://www.paincarelabs.com)



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Home Needle Fear Solutions

Days before a procedure, needle phobia can cause dread. This may result in moving home shots to a medical setting, or even discontinuing effective treatment. Before this happens, try a "do over" for children ages 4-10.

Kids are used to having new rules. When you are 100% consistent after calling a "do over," kids usually adapt in 1-3 events. "OK, this isn't working. Let's change this, make a plan for next time, and you choose what you want to try."

1) Write down coping options to make the new deal official. Have the *child* keep track of what worked. This gives them control and offers some objectivity about the process of making shots better.

2) Change body position. Lying on the back provokes anxiety. Try lying on the side, or sitting up in a low chair with the leg extended, not flexed. Tensing muscles makes shots worse, so extended but relaxed is the best. For injections in the arms, let the shoulders relax. For gluteal injections, lying prone (face down) is better than bending over. When possible, sitting on a parent's lap is a comforting position.

3) Choose a new active distraction. Focus attention away from the injection. Play a video game, blow on a kazoo, or count items you find in the room. Passive watching or listening usually do not work as well.



Home Needle Fear Solutions

4) Stimulate other sensations. Take a big sip of something cold and sweet right at the moment of the injection. Have your child turn Buzzy® on and off in their hand. Press Buzzy® to your child's chest or other body part (for counter-stimulation).

5) Create a reward system. Collect stickers, beads, or other "kid currency" for each injection towards a bigger prize. Having a tangible token actually helps.

6) Create a team reward! Decide on a prize for working on this together, like an outing to a movie or a favorite shop, collecting tokens toward the goal. The better you both do, the more points.

- 🍯 Both of you performed the plan perfectly? Three tokens for each.
- 🍯 You forgot to have the cold sweet drink nearby but otherwise did well? Two for you, three for her (and you got some feedback on what was most important to her).
- 🍯 You lost it, they had to be dragged out from under a table? 1 for her, 2 for you maybe, and the prize is still within reach.

Having a plan and feeling more in control can reset the fear wind-up. When fear sets in, remind her "No, no, this is going to be completely different, remember? We have our plan." Different methods work for different children. If one doesn't succeed, try another!

Visit PainCareLabs.com for more ideas, and if you have a solution of your own, email it to: info@PainCareLabs.com

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7 Secrets for Shots

Here are 7 quick tips that can decrease injection pain and improve compliance with necessary medical treatments.

1) Distract the nerves. Use the ice pack and Buzzy® on an injection site for 30-60 seconds to numb the skin to sleep. Slide Buzzy® proximal (toward the head) to the site, between the brain and the pain. Leave in place and vibrating while giving the injection, with the shot near the dot. If the medication stings, rub Buzzy® on the site afterwards. For IV placement, skip placing Buzzy on the site. Place it under the tourniquet, and go!

2) Relax the muscles. Pushing medication into taut muscles makes it hurt more, at the time and after the injection. Even passively stretched muscles hurt. Rather than bending over for a gluteal injection, try lying on your side with the buttocks muscles relaxed. Same thing for thigh shots: sitting up causes the muscles to be active, keeping you balanced. Try using a side position.

3) Distract your mind. Engaging the problem assessment part of the brain can reduce pain by half. While counting small items across a room can help, categorizing tasks work best. DistrACTION® cards have finding and categorizing questions on the back. Try counting how many letters in a sentence have holes (a,b,d,e,g..) or how many fish on wallpaper go in one direction.



7 Secrets for Shots

4) Distract the senses. The brain can process only so much at one time. Stimulate taste or smell to decrease pain. For example, immediately before a shot, guess the flavor of a cold and sweet mystery drink, a stick of gum, or breathe deeply from a lavender or mint sachet.

5) Focus on something you can control. Whether you're pinching your own finger, or thinking about the health or life benefits of the shot, concentrate on that thought, action, or sensation.

6) Topical anesthetics. L.M.X.4® is over-the-counter, and works in 30 minutes to dull the first stick. Try using plastic cling wrap to hold L.M.X.4® in place; it pulls off painlessly!

7) Blow! Blowing out physiologically calms nerves and reduces pain. For added fun, set up a pinwheel, bubbles, or grab a kazoo.



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Topical Anesthesia Tips

Multiple numbing medicines have been tested to reduce pain.

Lidocaine - This medicine puts a road block on the pain signal, but is hard to get under the skin.

These ways work best:

- 🌀 **J-Tip:** This is a pressurized puff of lidocaine that peppers through the skin with numbing. It works in a minute. It doesn't make IV access any easier. It can be a loud pop, so prepare for the sound.
- 🌀 **Little lidocaine first:** A small bit of lidocaine in a tiny 30g needle numbs effectively before a procedure. If fear is an issue, this does require 2 needle pokes.

EMLA - This is a mixture of 2.5% prilocaine and 2.5% lidocaine. It numbs up to ½ cm after 4 hours, but needs at LEAST 60 minutes or it can make IV access harder and numbing iffy. The research: many studies for IVs, effective in several infant studies for vaccines, studies are half and half for efficacy for preschoolers/pre-teens and vaccines.

LMX4 - Lidocaine 4% packed in fatty covering to get through the skin faster. Not FDA approved for needle pain. Works for IV access in multiple studies.

Shotblocker - 2-3x worse than Buzzy for vaccines,^{3,7} equivalent to Buzzy for small needle injections that don't sting (insulin).

Tip! Use J-tip or EMLA for LPs if time permits. Use Glad Press-N-Seal for keeping creams in place, it removes painlessly!



Topical Anesthesia Tips

Ice and vibration - Buzzy® with ice and vibration in a pain-canceling frequency is the most studied vaccination intervention,¹ with 28 injection studies and 37 studies for IV access (as of 9/2022). It is the ONLY intervention proven to reduce needle procedure fear.²,³ For blood draws, Buzzy is as effective as LMX with access in 3.5 minutes instead of 40.⁴ When used without ice, Buzzy is 5% less effective than EMLA, but costs \$13 less per use.⁵

Cold Spray - Vapocoolant can be a good part of a distraction routine, but is ½ the efficacy of Buzzy for adults, and is not recommended in a meta-analysis for venipuncture.⁶

	EMLA®	L.M.X.4®	Synera®	Buzzy
Prep Time (min)	60	20-30	20	1
Hassle	+++	+++	+	++
Duration	4h	1h	3h	Contact
Vasoconstriction	Yes	No	No	No
Issues	Methemoglobinemia, rare purpura	Tegaderm removal pain	Patch may burn, danger if chewed	Vibration may Tickle
Cost Per Site	\$5.7	\$5.7	\$12	\$0.09

From Venipuncture Updates, ACEP newsletter April 2009

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Improving Infant Immunizations

To get all the protection they need, infants need multiple shots at carefully studied intervals. While the preschool timeline is more flexible, the precise schedule has reduced infant deaths +99%. Fortunately, the infant vaccines do not cause needle fear when they get older, AND there are proven ways parents and providers as a team can improve comfort.

Before procedure: Infants take their cues from adults, so be positive and warm. If possible, breastfeeding has the best data for pain reduction. One study found pain with breastfeeding was 3.77, Buzzy 3.8, and nothing 4.83/10.¹ Sucrose and formula can help too. Since the Rotavirus vaccine is sweet, that should be given first.²

- 🌀 Topical anesthetics also help. EMLA has effectively reduced pain for infant vaccines, and doesn't impact their effectiveness. LMX hasn't been studied for this.

During procedure: Give injections with the child in a "position of comfort".

- 🌀 Skin to skin helps infants <1 month; cuddling or holding is recommended for all ages. Let children 3 years and older sit up in your lap; lying flat on the back provokes anxiety at all ages.
- 🌀 Our red, black, and white DistrACTION[®] cards are designed for babies 6 months and younger. For older infants and toddlers, directing them to look at the brightly colored cards while asking the questions on the back can help.
- 🌀 Holding a vibrating Buzzy[®] without ice against the chest, or directly proximal to the site of injections, can help provide a competing sensation.



Improving Infant Immunizations

Additional Evidence-Backed Tips

- For infants and toddlers, give the least painful vaccine 1st, most painful injection last. Interestingly, doing the reverse for pre-teens and HPV vaccines was better.
- Don't aspirate the vaccines! Multiple studies show aspiration is not needed for vaccines, and makes pain and distress worse.
- Simultaneous injections decrease distress for infants younger than 1 year.
- Sequential injections are recommended for older children.
Give injections in thigh at less than 11 months; use the arm when chubby enough.
- Since early pain experiences can make later injections worse, minimize the impact of the experience by cuddling the infant and having them dressed and ready to go as soon as shots are over.
- Leaving the room or area, or even changing altitude ("Let's stand up now!") helps reduce distress.
- More detailed instructions can be found on PainCareLabs.com

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Ask for a free download of our
White Paper on Needle Fear.

