

## J-TIP® NEEDLELESS DEVICE

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### Critical Points

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1. J-Tip® with buffered or standard preservative-free lidocaine may be used prior to any peripheral venipuncture (for peripheral intravenous access or phlebotomy), lumbar puncture (LP), or other minor procedures requiring small subcutaneous incision, in patients without any contraindications to its use.
2. Patient must weigh at least 5 kilograms and be a minimum of 8 weeks of age.
3. Do not use J-Tip over implanted vascular access ports.

### CONTRAINDICATIONS

1. The J-Tip device **should not be used in the following situations**. LMX4 (4% lidocaine topical cream) is an alternative for all but the last of these situations:
  - a. Patients weighing less than 5 kilograms.
  - b. Patients less than 8 weeks of age.
  - c. Patients with bleeding disorders (e.g., hemophilia)
  - d. Access of implanted vascular ports.
  - e. Patients for whom two J-Tip applications have already taken place within a 12-hour period.
  - f. Patients with history of allergy to lidocaine or amide-type local anesthetics.

### Supplies

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- Gloves
- J-Tip Injector: Single-use, needle-free injection device
- Sterile gauze
- Blunt needle
- Alcohol swab

#### **And**

- Vial of buffered lidocaine (Pyxis; to be drawn up by nursing staff)

#### **Or**

- Vial of standard preservative-free lidocaine (Pyxis; to be drawn up by nursing staff)

**J-TIP® NEEDLELESS DEVICE (continued)**

**Note:** 1% lidocaine that is buffered with sodium bicarbonate decreases the burning associated with lidocaine alone due to its acidity.

**Procedure**

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1. Confirm no allergy or sensitivity to lidocaine exists.
2. Perform patient identification and explain procedure to patient/family.
3. Draw up one or two doses of buffered or preservative-free lidocaine from a single vial in 1 mL syringe(s); use the second dose only if needed.
4. Verify order for J-Tip® lidocaine administration.
5. Gather all needed supplies.
6. Disinfect work surface.
7. Perform hand hygiene and don gloves.
8. Transfer lidocaine from 1 mL syringe into the J-Tip injector using the attached J-Tip orange transfer cap.
9. Scan the lidocaine into patient-specific MAR prior to use.
10. Select site of possible injection, using tourniquet if necessary, and assess skin for appropriate area for administration (i.e., sufficient subcutaneous space).
11. Remove tourniquet, if used (must occur before injecting J-Tip).
12. Disinfect selected site with alcohol wipe and allow area to dry completely. Residual disinfectant on skin may cause discomfort and/or stinging sensations during the procedure.
13. Slide down or remove orange safety clamp from top of J-Tip® injector device.
14. Ensuring sterility, remove orange transfer cap from tip of device.
15. Mark injection site by creating an impression on the skin with the injector by applying firm pressure so that the middle of the dot is directly over the desired needle entry site.
16. Prepare patient for the J-Tip activation sound (e.g., compare to a pop/soda can opening).
17. Prepare to activate J-Tip:
  - **For vascular access procedures:** place gentle traction on the skin (“z-track”) so marked area is not in direct alignment with targeted vessel. Alternatively, if vein rolls or moves with skin, mark injection site to side of vessel by aligning outer rim of the J-Tip tip with the vein; not the middle.
  - **For non-vascular access procedures:** activate J-Tip directly over targeted area.
18. Hold device perpendicular (i.e., 90-degree angle) and apply firm pressure so tip is flush with skin. Do not compress the subcutaneous space by pressing down too hard with the J-Tip.
19. Ensure CO<sub>2</sub> gas exit port (opposite to activation lever) is not aimed at patient, family member, or health provider.
20. Activate device by pressing the activation lever and maintain adequate pressure until injection is complete or until the ‘hissing’ sound stops.
21. Wait two to three seconds after injection before removing J-Tip® to avoid sliding or moving the injector during administration as this may cause skin trauma.
22. Anticipate that a skin wheal (i.e., white bleb) and/or small escape of blood may occur. Wipe skin wheal with sterile gauze to disperse medication over a larger area and, if desired, toward target vein.
23. Properly dispose single-use J-Tip device into a sharps container.
24. Wait two minutes before attempting vascular access to allow full analgesic effect.

## J-TIP® NEEDLELESS DEVICE (*continued*)

25. Proceed with desired procedure.
  - The analgesic effect will last approximately 20 minutes.

## DOCUMENTATION / EDUCATION

1. Provide education to patient and family members prior to procedure using age-appropriate language and props.
2. Document use of J-Tip, procedure performed, and patient response in the medical record.

## PRODUCT DIAGRAM

### Product Overview - How J-Tip Works

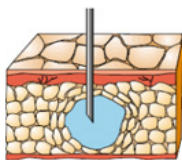
#### How J-Tip Works



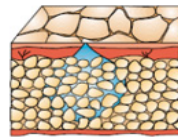
J-Tip Needle- Free Injection System is a revolutionary way of delivering medication into the subcutaneous without the use of needles.

Unlike a needle which pierces the skin, J-Tip uses pressurized gas to propel medication through the skin and into the subcutaneous within a fraction of a second. This provides for a quick and broad dispersion of medication throughout the sub-Q. After injection, J-Tip can simply be discarded as with normal needle disposal.

#### J-Tip Vs. Needle



Needles leave a pool of medication which takes longer to disperse and be absorbed

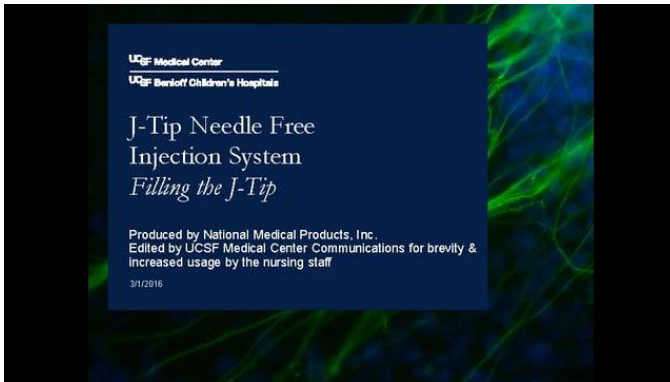


Injection by J-Tip disperses medication in a spray like pattern into the sub-Q tissue. Rate of absorption is relatively faster due to increased fluid surface area.

## Instructional Video

### How to Use the J-Tip Needle Free Injection System

## J-TIP® NEEDLELESS DEVICE (*continued*)



## References

Level of Evidence (FAME*)	Level*	Reference
Level of Evidence (FAME*)	E4	Lunoe, MM, Drendel AL, Levas MN, et al. (2015). A randomized clinical trial of jet-injected lidocaine to reduce venipuncture pain for young children. <i>Annal of Emergency Medicine</i> , 66(5):466-74.
	E4	Venipuncture Pain for Young Children. <i>Annals of Emergency Medicine</i> . 1 – 9.
	E4	Spanos S, Booth R, Koeinig, et al. (2008). Jet injection of 1% buffered lidocaine versus topical ELA-Max for anesthesia before peripheral intravenous catheterization in children: A randomized controlled trial. <i>Pediatric Emergency Care</i> , 24(8):511-5.
	E4	J-Tip User Guide: <a href="https://jtip.com/needle-free-injector-simple-steps-for-painless-iv/">https://jtip.com/needle-free-injector-simple-steps-for-painless-iv/</a>

\* FAME Scale details: See nursing policy, *Procedure, & Competency Development, Review, & Approval*

## Procedure History

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