

**PEORIA AREA EMS SYSTEM
PEDIATRIC PREHOSPITAL CARE MANUAL**

**Pediatric Intravenous
Cannulation Procedure**

Intravenous cannulation is used in the prehospital setting to establish a route for drug administration and/or to provide fluid replacement. Intravenous cannulation should not significantly delay scene times or be attempted while on scene with a trauma patient who meets load-and-go criteria.

1. Explain to the patient the need for and a brief description of the procedure. Use distraction therapy to put the pediatric patient more at ease.
2. Observe the universal precautions for body substance exposure.
3. Obtain an appropriately sized catheter:
 - a) 18 or 20 gauge for trauma patients.
 - b) 20 or 22 gauge for fluid replacement.
4. Check the fluid (1000mL .9% Normal Saline):
 - a) Is it the right fluid?
 - b) Check the expiration date.
 - c) Check for color and clarity (NS should be clear with no particles).
5. Connect the administration set to the IV fluid. Make sure that air bubbles are expelled from the tubing and that all chambers have the appropriate fluid levels.
6. Prepare veniguard (or tape).
7. Maintain a clean environment and protect the administration set from contamination. *Any IV supplies that become contaminated (e.g. an uncapped administration set dropped on the floor) should be discarded and replaced with clean equipment.*
8. Apply a venous tourniquet just proximal to the antecubital area.
9. Select (by palpation) a prominent vein. Choose a distal vein on the forearm or back of the hand. The antecubital space may be used if needed for drug administration, fluid replacement, the patient condition requires a more proximal site, or in cases where no other vein is accessible.
10. Cleanse the site with an alcohol prep pad using a circular motion moving outward from the site.

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- 11.** Stabilize the vein by applying traction below the puncture site.
- 12.** Inform the patient of your intent to puncture the site.
- 13.** Enter the vein directly from above or from the side of the site. With the bevel of the needle upward, puncture the skin at a 30 to 45 degree angle.
- 14.** If you blood returns through the catheter, proceed with insertion. If you do not see blood return, release the tourniquet and discontinue the attempt. If time and patient condition allows, you may attempt another site with a new catheter (do not exceed more than two (2) attempts).
- 15.** Insert the catheter. Carefully lower the catheter and advance the needle and catheter just enough to stabilize the needle in the vein. Slide the catheter off of the needle into the vein.
- 16.** Slightly occlude the vein proximal to the catheter with gentle finger pressure. Remove the needle and immediately dispose of it in an approved sharps container.
- 17.** Release the tourniquet.
- 18.** Connect the administration set to the catheter.
- 19.** Open the flow regulator on the administration set and briefly allow IV fluid to run freely to assure a patent line (less than 20mL). If the line is patent, adjust flow rate as indicated by protocol or Medical Control order.
- 20.** Secure the catheter and tubing using a veniguard or tape. Loop the IV tubing and secure to the patient's arm. Do not apply tape circumferentially to the extremity.

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Saline Locks

Saline locks may be used if fluid replacement is not indicated:

1. Assemble the pre-filled saline and tubex syringe or draw up 2-3mL of normal saline.
2. Obtain and inspect an injection site link. Inject saline and expel air from the injection site chamber leaving the syringe attached.
3. After successful venipuncture, connect the saline lock to the catheter.
4. Pull back (aspirate) on the syringe to confirm placement by observing for blood return. If blood is aspirated, continue by injecting 2-3mL of saline into the chamber. If no blood is aspirated, discontinue the attempt and prepare to repeat the procedure at a new site.
5. If fluid replacement becomes necessary, attach an administration set to the injection port by needleless device or Luer adapter.
6. Secure the catheter and link using a veniguard or tape.