

CHAPTER	II	Operations
SUBJECT	4	Emergency Medical Services
TOPIC	8	Saline Lock Set-up

A. INDICATIONS

Instances in which an EMT-Basic may assist in the set up of Saline Locks:

1. Anytime the need for drug administration may be anticipated.
2. At the request of a Cincinnati Fire Department paramedic.

B. PHYSICAL FINDINGS

1. Altered mental status/unconsciousness.
2. Seizures that have resolved.
3. Blood sugar less than 60mg/dL greater than 200mg/dL.
4. Shortness of breath. Unable to complete sentence without taking a breath.
5. Pitting edema in feet.
6. Presence of rales (crackles) upon auscultation of lungs.
7. Chest Pain.
8. As requested by a Cincinnati Fire Department paramedic.

C. PROCEDURE

1. Determine whether the paramedic will establish the saline lock while on the scene or enroute to hospital.
2. The EMT should practice universal precautions.
3. Obtain the following:
 - Saline Lock
 - 10 cc syringe with needle attached (if available)
(EMT may need to place a needle on the syringe, in this case choose a needle that has a gauge diameter 18 or 20 and measures 1 to 1 and ½ inch length – information should be listed on the package)
 - Small bottle (10-20ml) of 0.9% sodium chloride.
 - Padded IV arm board and one 2” or 4” wide cling roll (optional or at request of paramedic).
 - Prepackaged IV start kit OR the following items: tourniquet, alcohol pad, small gauze pad (4”x 4” or 2”x 2”) 3 to 4 pieces of 1” tape torn into strips approximately 2 to 3 inches in length and optional commercial IV dressing such as Tegaderm® (optional).
 - A few extra 4x4 gauze pads and alcohol preps may be necessary

4. Confirm that the bottle or prefilled syringe is labeled “0.9% sodium chloride” (normal saline). If the bottle or syringe does not have 0.9% sodium chloride on the label, or appears to contain medication, notify the paramedic immediately. Unlike IV solutions, **MEDICATIONS OR ADDITIVES** contained bottles or prefilled syringes **WILL NOT APPEAR IN RED**. The EMT **MUST** check these carefully.

5. Check saline solution (bottle and/or prefilled syringe) for expiration date. The expiration date usually appears as “EXP Month/Year.”

6. Bottles should be intact, and show no evidence of being opened previously or otherwise tampered with.

Bottles should have a hard plastic cap in place and the EMT should not be able to visualize the rubber stopper beneath the cap. If the plastic cap is in place, it means the bottle has not been previously opened. Once it has been confirmed that the bottle was not previously opened, the EMT may remove and discard the plastic bottle top. (By removing the top, you are exposing the rubber stopper to contamination. Place the bottle upright on a flat surface and don’t allow anyone or anything to make contact with the top of the bottle).

7. Load the syringe.

Locate the 10cc syringe with the capped needle in place. Twist the needle in a clockwise motion on the end of the syringe (this ensures that the needle is adequately secured). Draw back on the plunger of the syringe and line the black tip with the 10ml marking on the barrel (if the plunger is withdrawn too far and separates from the barrel, obtain a new syringe and repeat the process). Clean the rubber stopper with alcohol prep, and allow it to air dry. Remove the cap from the needle on the syringe and use the needle to pierce the rubber stopper. Push the plunger all the way forward. Invert the bottle of normal saline and maintain a hold of the bottle and syringe barrel. The syringe should automatically fill with saline to the 10ml line. If the syringe does not adequately fill, remove it from the bottle, hold it upright and purge the air through the end of the needle.

Again, you will need to cleanse the rubber stopper before puncturing the bottle a second time and withdrawing more fluid.

8. The EMT may assist the paramedic in removing the saline lock from the package and connecting the lock to the hub of the angiocath. The EMT may not administer the normal saline into the lock.

9. **IMPORTANT:** The EMT must avoid contaminating the rubber port of the saline lock, the rubber stopper on the top of the saline bottle and the needle. Contamination occurs when any of these items is touched by an object (hand, ground, clothing, etc). If contamination occurs, a new bottle, syringe or lock should be used.

10. Do not re-use saline locks, saline solution or syringes. Each time a syringe is used to puncture the top of a saline bottle or the rubber end of the saline lock, the surface should first be cleansed with an alcohol prep. If for any reason the saline lock and associated

supplies (i.e. bottle of saline and syringe) cannot be used on the intended patient, it must be properly discarded. A new saline lock and new set of supplies should be used for each patient

Notes:

1. *EMT-Basics are prohibited from filling syringes with any drug or solution with the exception of normal saline. If a paramedic (regardless of rank) asks an EMT to assist by loading or otherwise administering any medication through an IV line or saline lock, the EMT must REFUSE on the basis of that doing so will violate the established scope of practice. (Refusing to act beyond the established scope of practice protects both the EMT and the Paramedic from potential legal complications, at minimum, revocation of both providers' EMS certifications by the State of Ohio). Report anyone who attempts to be coercive or non-compliant with this policy to the Rescue 2 Lieutenant on duty, OR the paramedic commander OR Rescue 1.*
2. *This protocol serves as physician authorization for EMT-Basics to assist paramedics in setting up saline locks. This protocol meets the guidelines published in the Ohio Administrative Code 4765-15-04 (EMT-Basic Scope of Practice)*
3. *Questions regarding saline locks, IV saline lock supplies and equipment or the process of setting up a saline lock that arise during the course of an EMS incident, should be directed to the paramedic(s) on the scene (and involved in patient care). General questions or concerns regarding saline locks or this procedure shall be forwarded to the medical director.*
4. *Contamination of the saline bottles, needles or ports can lead to severe infections (both local and systemic) and subsequent death of the patient*
5. *If the EMT is unsure of whether a saline lock, syringe, fluid or other supply has been grossly contaminated, or tampered with, keep the following phrase in mind: "When in doubt...throw it out."*
6. *The paramedic bears the ultimate responsibility for a saline lock that was set up by an EMT-Basic. It is recommended that the EMT and the Paramedic work collectively to ensure that the proper procedures have been followed.*