

**DELAWARE STATE FIRE SCHOOL**  
**For your instruction: In-service drill**

**USE OF AIR SPLINTS**

**PURPOSE**

This drill is designed to refresher personnel in the application of air splints.

**OBJECTIVES**

At the conclusion of this drill, the member will have participated in the following evolutions:

1. Explain the purpose, parts, and application of the air splint.
2. Explain the use of manual traction in conjunction with the application of the air splint.
3. Demonstrate the proper application of the air splint acting as a member of a two-person team. First as the member holding traction and applying the splint and next as the member assisting with traction, support of the injured site and inflating the splint.
4. Each member should demonstrate his or her skills on both the upper and lower extremities.

**Note:** All demonstrations should be done on fellow team members.

**EQUIPMENT**

1. Assorted sizes of air splints
2. Sling and swath



**Note:** The member conducting the drill should review all materials prior to conducting the drill.

**References**

Brady Emergency Care seventh edition, Ed T. Dickinson, M.D  
Prentice Hall 1995

**SKILL**

1. Member conducting the drill will explain the purpose, parts, and the application of the air splints. Member will also review any interdepartmental S.O.P.'s pertaining to the use of air splints.

A. **Purpose:** Emergency care for all painful, swollen, or deformed extremities is splinting. Effective splinting minimizes the movement of disrupted joints and broken bone ends, and it decreases the patient's pain. It also helps prevent additional injury to soft tissue. Splinting can prevent a closed fracture from becoming an open fracture, and it can help to minimize blood loss

B. **Parts:**



C. **Application:**

**Step 1**



Assess distal motor ability (PMS) pulse, motor, sensory

**Step 2**



Prepare splint with baby powder to prevent splint from sticking to patient

**Step 3**



Hold manual stabilization

**Step 4**



Slide splint in place (never let go of manual stabilization)

**Step 5**

**Step 6**



**Inflate the splint by mouth to a point you can make a slight dent in the plastic when you press it with your thumb**



**Re-assess PMS  
Pulse, motor, sensory**

**Note:** Air-inflated splints may leak. When applied in cold weather, an inflatable splint will expand when the patient is moved to a warmer place. Variations in pressure also occur if the patient is moved to a different altitude. Frequently monitor the pressure in the splint with your fingertip.

2. Member conducting the drill will demonstrate the proper application of the air splint. (Use a student as the second member of the team).
3. The member will demonstrate the proper application of an air splint working as a two-person team. Each member should have the opportunity to apply the splint, hold traction and inflate the splint.
4. Member shall review the application of the splint to both the upper and lower extremities. While splinting the upper forearm, the member should demonstrate the proper use of a triangular bandage for support as a sling and as a swath around the upper arm and trunk of the body.



**Sling and swath method**

5. Document the time in which the air splint was applied



6. Member conducting the drill should cover where the air splints are located on the apparatus and do a final review of the material covered.

### **Evolutions**

Evolution #1: Participants, working in teams of two (2) shall demonstrate the act of applying manual traction to both upper and lower extremities.

Evolution #2: Participants shall explain the parts, function, application, and safety precautions when using the air splint.

Evolution #3: Participants, working in teams of two (2) will demonstrate the proper application of the air splint to both upper and lower extremities.

### **Conclusion**

Bone and joints injuries always require splinting prior to movement of the patient. However, always remember that splinting is secondary when patients have life threatening injuries that need to be managed.

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