

Training Model for Securing Venous Tract

LM-086

Instruction Manual

Thank you for purchasing the Training Model for Securing Venous Tract.
Please read this instruction manual carefully to ensure correct use of the product,
and store it in a safe place for easy access.

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1. Outline and Features

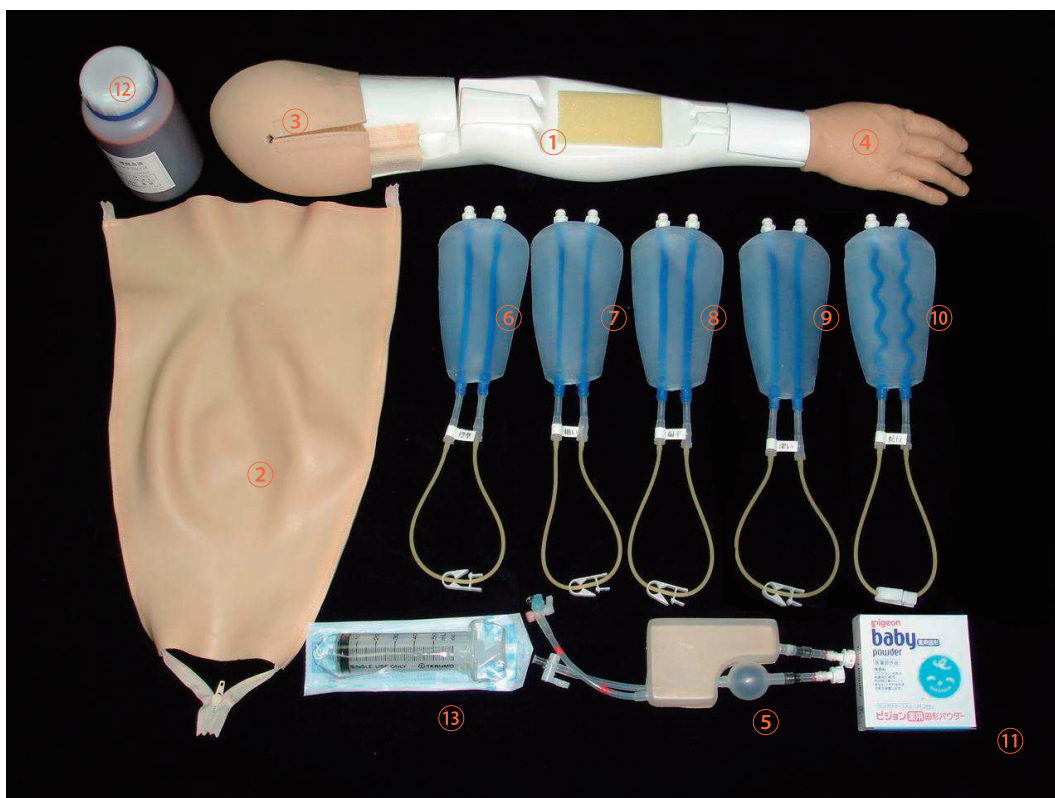
Outline

Emergency medical technicians need to secure intravenous (IV) lines when administering medicine. This model is used for thorough training in how to establish an IV line. It enables excellent training focusing on securing IV lines that includes everything from a basic IV line to specialized training for narrow or deep veins, for example. It can be installed onto the SaveMan Standard, SaveMan, SaveMan Advance or Advanced Life Support Simulator.

Features

- Can be used to practice securing an IV line in the median antebrachial vein or the opisthenar vein.
- The simulated blood vessels are encased in silicone gel to simulate the actual sensation of blood vessels slipping away during a puncture attempt and of a blood vessel being punctured completely through.
- There are five kinds of disposable, interchangeable simulation blood vessels for setting various scenarios.
- Silicone rubber is used in the main parts such as the skins for an appearance and sensation that is similar to that of the human body, enabling realistic practice.
- A unique structure simulates venous pressure to enable confirmation of venous blood backflow.

2. Components and Configuration



	Names of the Components	Quantity
①	Training Model for Securing Venous Tract main unit	1
②	Arm skin	1
③	Shoulder skin	1
④	Hand skin	1
⑤	Blood bag	1
⑥	Vein part (standard type)* ¹	1
⑦	Vein part (narrow type)* ²	1
⑧	Vein part (flat type)* ³	1
⑨	Vein part (deep type)* ⁴	1
⑩	Vein part (meandering type)* ⁵	1
⑪	Baby powder	1
⑫	Simulated blood	1
⑬	50 ml syringe	1

*1. Blood vessel shape: standard

Blood vessel depth: standard

*2. Blood vessel shape: narrow

Blood vessel depth: standard

*3. Blood vessel shape: flat

Blood vessel depth: standard

*4. Blood vessel shape: standard

Blood vessel depth: deep

*5. Blood vessel shape: meandering

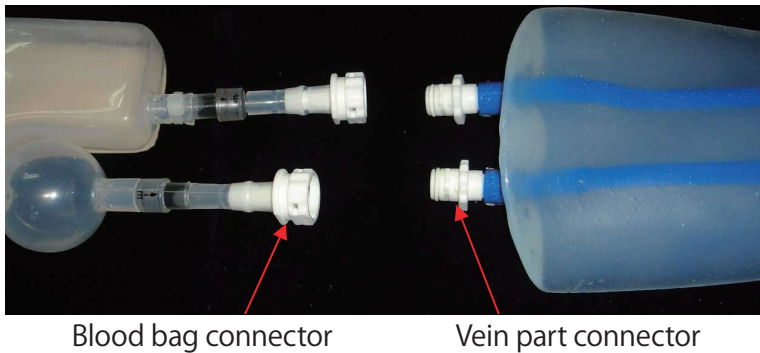
Blood vessel depth: standard

*Do not dispose of the re-sealable plastic bags that contain the arm skin and vein parts. These bags are used for storing the arm skin and vein parts.

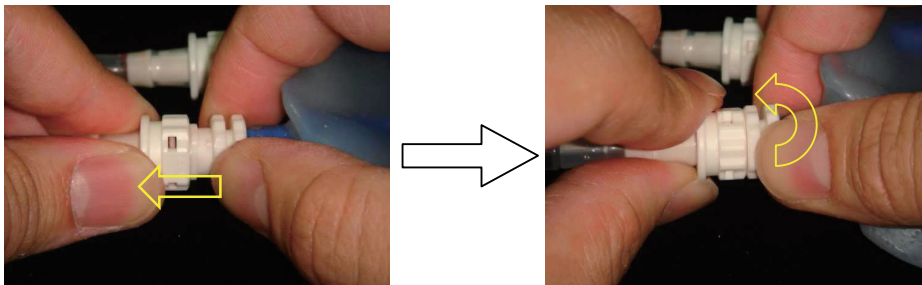
3. Attaching the Vein Part

1. Apply baby powder to the vein part, and then insert the vein part connector into the blood bag connector.

* If the connector is not secured tightly enough, liquid may leak out. Make sure the connector is tightly secured.

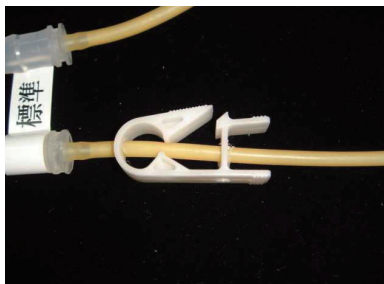


When attaching the vein part, hold each connector, insert the vein part connector deep into the blood bag connector, and then turn the blood bag connector 90° .

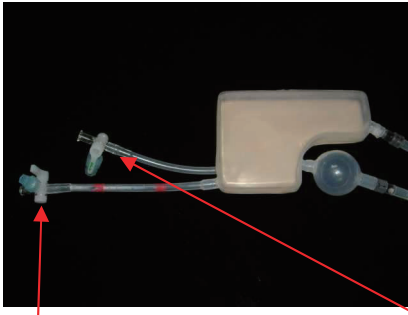


When attaching or removing vein parts, do not hold them by the gel bag. Doing so may damage the vein part. Always hold the vein parts by the connector.

2. Make sure the vein part pinch clamp is open.



3. Attach the syringe provided as an accessory to the blood valve, release the air from the blood bag, and then close the blood valve.



Blood valve (tube with red lines) Air valve



4. Fill the syringe with simulated blood, attach it to the blood valve, and then open the blood valve and inject approximately 100 cc of simulated blood into the blood bag. After injecting simulated blood, close the blood valve.



5. Squeezing the circular bulb will circulate the simulated blood and cause air in the blood vessel to accumulate in the blood bag.



* As the narrow vein part and the flat vein part have small diameter blood vessels, simulated blood does not circulate easily through these vessels. Press the circular bulb of the blood bag repeatedly to create good circulation.

6. Use the syringe to release the air that has accumulated in the blood bag.



7. Peel back the shoulder skin and hand skin on the Training Model for Securing Venous Tract main unit, and then open the compression site and wrist flap.

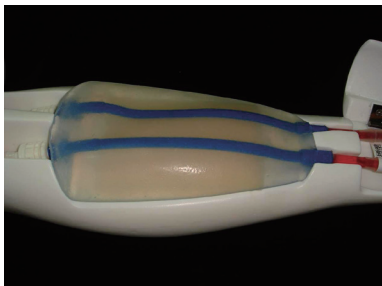


Shoulder skin Compression site

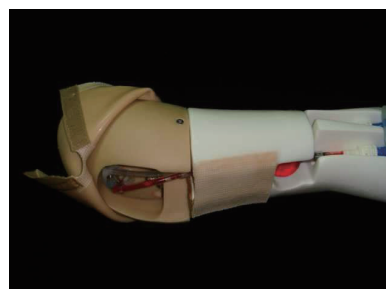
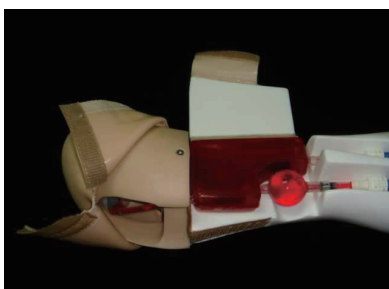
Wrist flap

Hand skin

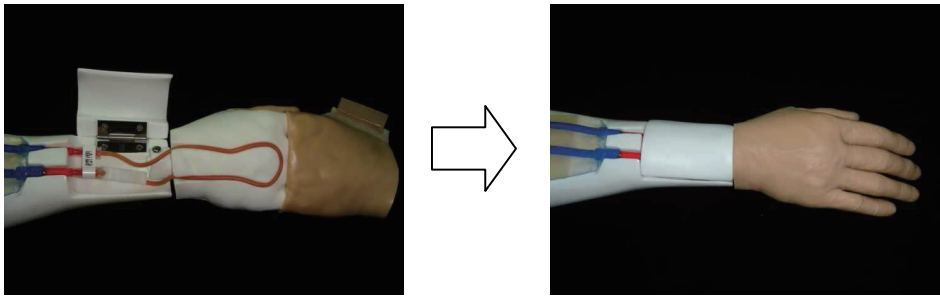
8. Set the vein part in the position shown below.



9. Set the blood bag in the position shown below, and then insert the blood valve and air valve into the shoulder compartment. Close the hook and loop fasteners on the compression site to secure the blood bag in place.



10. Set the opisthenar tube in the groove on the back of the hand as shown below, close the flap, and set the hand skin in place. Apply baby powder to the hand skin.



Set the opisthenar tube in the groove, making sure that it is not pinched by the wrist flap, and then close the flap.

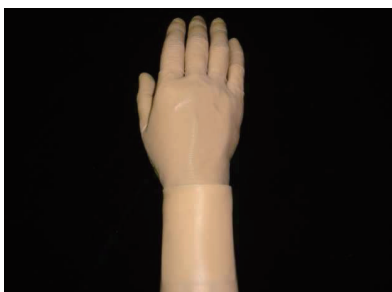
11. Apply baby powder to the arm skin, and then attach it to the Training Model for Securing Venous Tract main unit.

* When attaching the arm skin, apply baby powder liberally to the underside of the arm skin and the arm part that will be covered by the skin. Friction can cause the skin to tear.

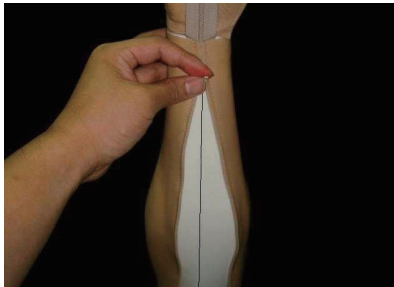
- ① Unzip the zipper on the arm skin, and then pull it on over the hand.



- ② Align the arm skin to the edge of the wrist flap part.



③ Zip up the zipper along the marked line on the Training Model for Securing Venous Tract main unit.

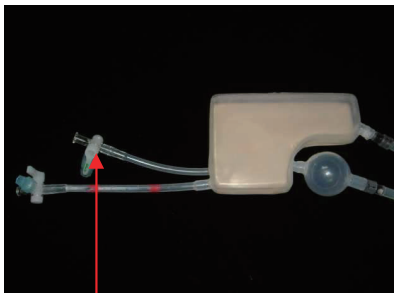


④ Set the shoulder skin in place to complete the assembly.



* Before using, always make sure the vein part pinch clamp is open.

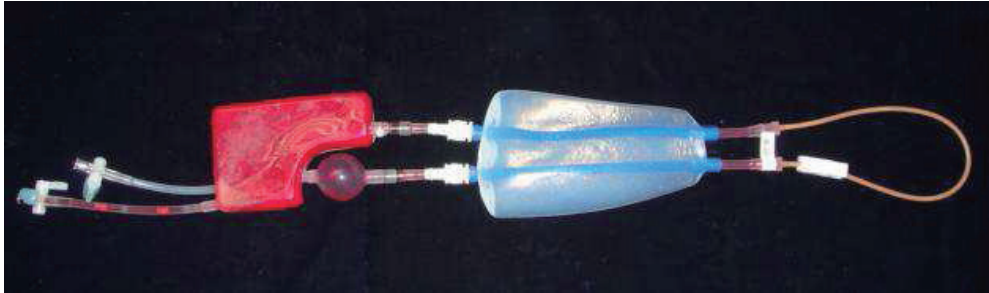
* If there is little backflow during use, inject air into the air bag to raise the intravascular pressure. Peel back the shoulder skin, remove the blood bag air valve and inject air with a syringe.



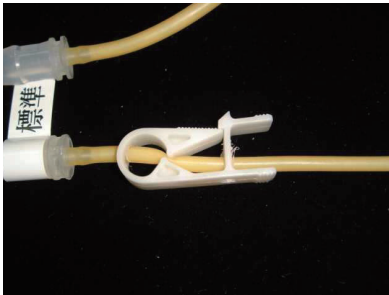
Air valve

4. Exchanging the Vein Part

1. Remove the arm skin from the Training Model for Securing Venous Tract main unit, and then remove the vein part and blood bag.

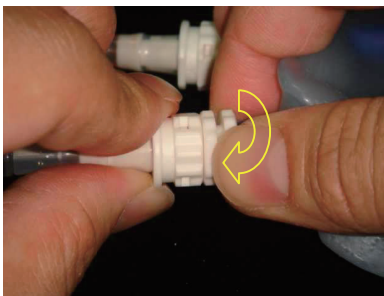


2. Clamp the opisthenar tube with the vein part pinch clamp.



* If the clamp is open, simulated blood will leak out. Be sure to close the pinch clamp before exchanging vein parts.

3. Hold the vein part connector and blood bag connector and turn the blood bag connector 90° to remove it.



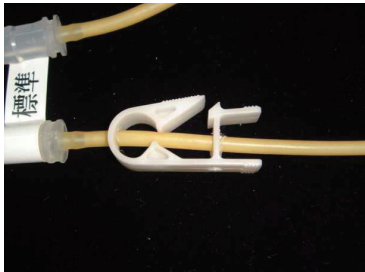
4. Attach the vein part to be used. (See 3-1 on page 4)
5. After attaching the vein part to be used, open the pinch clamp, squeeze the circular bulb of the blood bag to circulate blood, remove air that has accumulated in the blood bag using the syringe, and then attach it to the Training Model for Securing Venous Tract main unit. (See 3-5 to 3-11 on pages 5-8)

5. Caring for the Blood Bag and Vein Parts

1. Remove the vein part and blood bag from the Training Model for Securing Venous Tract main unit.



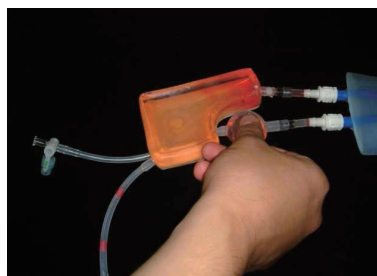
2. Make sure the vein part pinch clamp is open.



3. Open the blood valve and remove the simulated blood with the syringe.



4. Inject water with the syringe via the blood valve, and then squeeze the circular bulb to circulate the water. Then, remove the water with the syringe via the blood valve.





5. The water will be clear after repeating these steps 4 or 5 times. Next, remove the water, disconnect the vein part from the blood bag, and let them dry.

6. Caring for Other Parts

1. Remove the arm skin and wash it with water. If the hand skin and shoulder skin are dirty, wash them with water as well. After washing them, let them dry, and then be sure to apply baby powder. If baby powder has not been applied, the next time they are used, the skins will stick to the vein part and flesh parts, making them difficult to set up.
2. Remove the vein part and blood bag from the Training Model for Securing Venous Tract main unit, and then wash the Training Model for Securing Venous Tract main unit if it is dirty. After washing, let it dry.

7. Attaching the SaveMan Arm

* The Training Model for Securing Venous Tract can also be attached to the SaveMan Standard, SaveMan, the Advanced Life Support Simulator, and the SaveMan Advance.

1. Remove the clothes from the SaveMan, pull the torso skin up lightly, and remove it from the electrode part.

* Do not use excessive force when removing the torso skin from the electrode part. Doing so may tear the torso skin.



2. Insert your hand into the torso compartment remove the SaveMan arm nut and washer, and then remove the arm.



3. Remove the silicone tube, wingnut, and washer from the Training Model for Securing Venous Tract. Insert the screw protruding from the Training Model for Securing Venous Tract into the torso compartment hole, and then secure it to the torso compartment with the washer, wingnut, and silicone tube removed in the previous step, as shown below.



Washer Wingnut Silicone tube

* The silicone tube keeps the wingnut from loosening and the arm from falling off. Make sure that it is attached.

4. Reset the torso skin in place, and then put the clothing back on the model.



8. Storing the Training Model for Securing Venous Tract

1. Always apply baby powder to the arm skin and vein parts and store them in the re-sealable plastic bags provided at the time of purchase.



* The vein parts are encased in silicone gel to reproduce a life-like puncturing sensation. If they are stored touching the arm skin for a long period of time, the ingredients in the vein part material may seep into the arm skin and cause it to swell. Be sure to store the arm skin and vein parts separately.

9. Handling Precautions

1. This model is made to simulate the texture of the human body. Excessive force may damage the model.
2. Do not place objects on top of the model main unit. This may result in deformation.
3. To clean smudges or marks that are difficult to remove, wipe with a moist gauze or similar material using a neutral solvent diluted with water. Do not use thinners, benzene, or similar solvents.
4. Priority in the vein parts was given to creating a lifelike puncturing sensation and to realistically simulate the texture of human skin. Focused puncturing on a single part of a blood vessel may considerably shorten the time before the vein part must be exchanged. Try to avoid focusing punctures on single sites as much as possible.

*Using a hypodermic needle thicker than 20G may considerably shorten the time before the vein part must be exchanged. Where possible, use a 20G or thinner hypodermic needle.

5. When not in use, store the model away from direct sunlight or UV.
6. Wrapping the model in a tourniquet will raise the intravascular pressure. Remove tourniquets when not in use.

7. With frequent puncturing, liquid may leak from the puncture site of the vein part. This is largely influenced by the amount of simulated blood in the blood bag, how the circular bulb of the blood bag for circulation is pressed, how a tourniquet is wrapped, the tightness of secured parts, the type and size of needles used and the puncturing angle.
8. The blood vessel parts used in this model are encased in silicone gel, and differ from the latex tubes used in other products. They are made to prevent simulated blood from leaking as readily as from conventional latex tubing; however, puncture holes do not close completely.

10. Specifications

	Length	Width	Height	Weight
Arm main unit	Approx. 70cm	Approx. 12 cm	Approx. 12 cm	Approx. 2.4kg