

1-800-862-2731

Administration of IV Medications Using the GemStar® Pump
INOTROPIC INFUSION

Drug Name: _____

Volume and Rate: _____

Schedule: _____

KEY POINTS

1. Always wash your hands with an antibacterial soap or antiseptic hand gel before any procedure for 15 seconds. Do not touch anything dirty, such as your clothes, glasses or skin after washing your hands. If you do, rewash them.
2. If your medication needs refrigeration, remove at least 2 hours before using.
3. Check the bags and syringes for leaks, expiration dates, color changes and floating materials. If any of these occur, set aside and use another. Notify HomeMed.
4. Always check the bag label for your name, drug name, dose and how frequently the drug should be given. If the information does not match, call HomeMed immediately.
5. Work at a comfortable pace. The risk of contamination increases if you rush.
6. Change your IV tubing every 3 days. Labels will be provided.

SUPPLIES:

- (1) Prefilled IV bag
- (1) GemStar® IV tubing (remove from package)
- GemStar® pump
- (2) alcohol wipes
- Household cleaner (such as bleach, alcohol or dish soap) & paper towels



**Wash your
hands**

PROCEDURE:

1. Place a trash can next to your work area.
2. Wash your hands by first wetting your hands and wrists under running water. Scrub vigorously with antibacterial soap for 15 seconds. Work lather between fingers, under nails, over the palms and back of hands. Rinse hands well by keeping your hands up with fingers pointing up towards the ceiling so that the dirty water runs toward your elbows. Dry your hands with a clean paper towel from the tips of fingers down. Turn off the faucet with the paper towel.

3. Gather your supplies and place in a corner of your work area.
4. Place a clean paper towel on your work surface or clean it with a household cleaner. Let the area air dry.
5. Place the supplies on your clean work area.

ONLY FLUSH YOUR IV LINE WITH CLINICIAN PERMISSION

PREPARING YOUR SALINE LOCK SYRINGE

1. Hold the prefilled saline syringe upward (figure 1).
2. **Do not remove the cap.** Press on the plunger. (figure 1). **DO NOT** pull back on the plunger.
3. Remove the protective cap from the end of the prefilled syringe (figure 2).

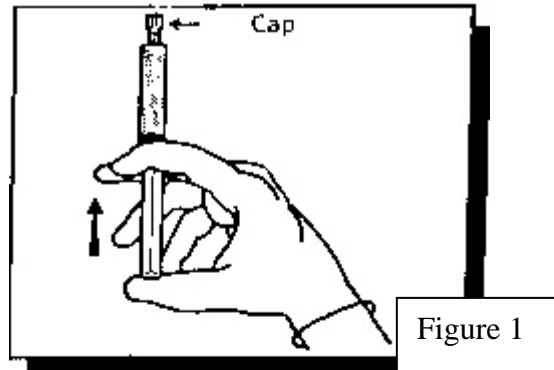


Figure 1

4. Attach a blunt needle to the syringe by:

Twisting the green cap off the blunt needle. Attach the needle to the syringe by turning the needle clockwise. Do not remove the gray cap that protects the blunt needle.

5. Hold the syringe with the needle pointing upward. If bubbles appear, gently tap the sides of the syringe. The bubbles will rise to the top of the syringe.

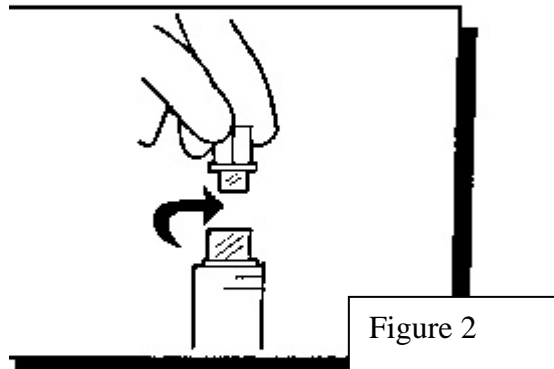


Figure 2

6. Push the plunger to the 5 mL mark to push all the air out of the syringe (figure 3).
7. If you are instructed to disconnect from your IV you will need to flush with heparin lock flush after saline flush.

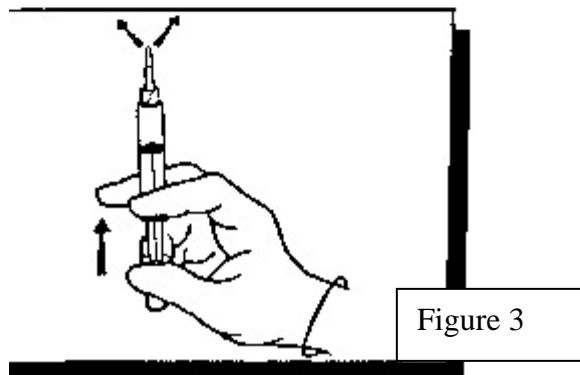
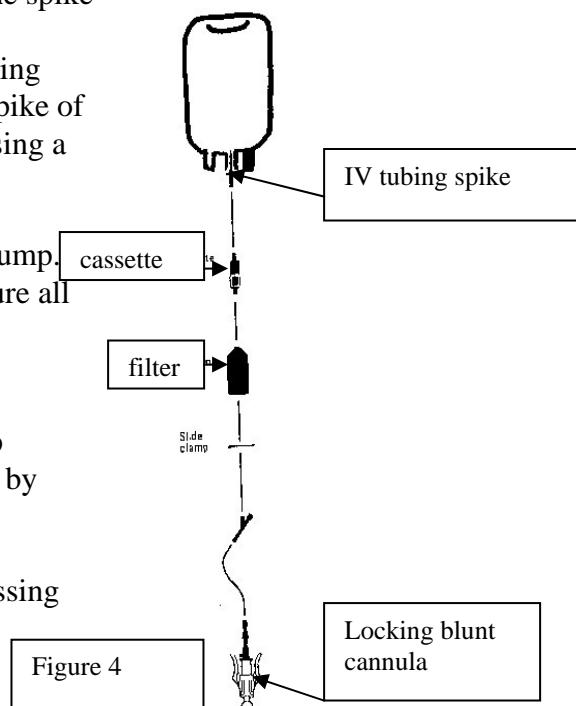



Figure 3

PREPARING YOUR IV TUBING

1. Remove the white tab on the IV bag to expose the spike
2. Remove the spike cover on the end of the IV tubing (figure 4). **Do not touch the spike.** Insert the spike of the IV tubing into the spike port of the IV bag using a pushing-twisting motion.
3. Insert the IV tubing cassette (figure 4) into the pump. Press on cassette until you hear a click. Make sure all four cassette latches are clearly visible after the cassette is installed.
4. Turn the GemStar® pump on. Review the pump program with the instruction sheets given to you by your *HomeMed* clinician.
5. Prime the tubing on the GemStar® pump by pressing the [**PURGE**] key. The screen will display the following prompts:



SCREEN DISPLAY	WHAT TO DO
<div style="border: 1px solid black; padding: 10px; text-align: center;"> PRIME THE SET? YES OR NO </div>	Press the [YES/ENTER] key to begin priming.
<div style="border: 1px solid black; padding: 10px; text-align: center;"> TO PRIME, PRESS AND HOLD THE PURGE KEY </div>	Press and hold the [PURGE] key, while holding the filter with pointed end up. Make sure all air is removed from the container, cassette and tubing. <div style="text-align: right; margin-top: 10px;">  </div>
<div style="border: 1px solid black; padding: 10px; text-align: center;"> PRIME COMPLETE? YES OR NO </div>	When the [PURGE] key is released, you will see this display. If there is no air in the tubing, press [YES/ENTER] key. If you continue to see air in the tubing, press the [NO] key and continue to prime the tubing.

After you have finished priming the tubing:

6. Open the locking blunt cannula, being careful not to touch the end that does not have a protective cover. Twist this open end of the locking blunt cannula onto the end of the IV tubing (figure 4).

STARTING YOUR MEDICATION

1. **Vigorously** scrub the end of the cap on your catheter with an alcohol wipe.
2. Remove the clear protective cap from the locking blunt cannula attached to the IV tubing.
3. With one hand, hold your catheter by the hub and with your other hand squeeze the “wings” of the locking blunt cannula together and insert it into the cap of your catheter (figure 5).

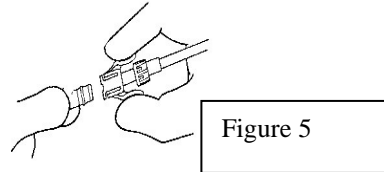


Figure 5

4. Open the clamp on your catheter.
5. Push the green **[START]** key on the GemStar® pump to begin the infusion. Make sure the pump is infusing by checking the screen. There should be arrows moving across the screen.
6. Once your pump has started infusing, place the IV bag and pump into the backpack/fanny pack.

CHANGING AN IV BAG OR CONTAINER USING EXISTING PUMP TUBING

SUPPLIES:

- (1) Prefilled IV bag
- (1) GemStar® pump
- (2) alcohol wipes
- Household cleaner (such as bleach, alcohol or dish soap) & paper towels

PROCEDURE

1. Wash your hands by first wetting your hands and wrists under running water. Scrub vigorously with antibacterial soap for 15 seconds. Work lather between fingers, under nails, over the palms and back of hands. Rinse hands well by keeping your hands up with fingers pointing up towards the ceiling so that the dirty water runs toward your elbows. Dry your hands with a clean paper towel from the tips of fingers down. Turn off the faucet with the paper towel.
2. Gather your supplies and place in a corner of your work area.
3. Place a clean paper towel on your work surface or clean it with a household cleaner. Let the area air dry.
4. Open the carrying pack and place the empty IV bag and pump on the work area.



5. Stop the Gemstar pump.
6. Remove the tab from the new IV bag.
7. Remove the spike from the old IV bag being careful not to touch the white, spiked end of the tubing.
8. Insert the IV tubing spike into the new IV bag by using a twisting/pushing motion.
9. Press the **[CHANGE]** key
10. Press **[#1] NEW CONTAINER.**
11. Press the **[START]** key to begin your infusion
12. Place the IV bag and pump in your carrying pack.

REMOVING AIR FROM THE IV TUBING

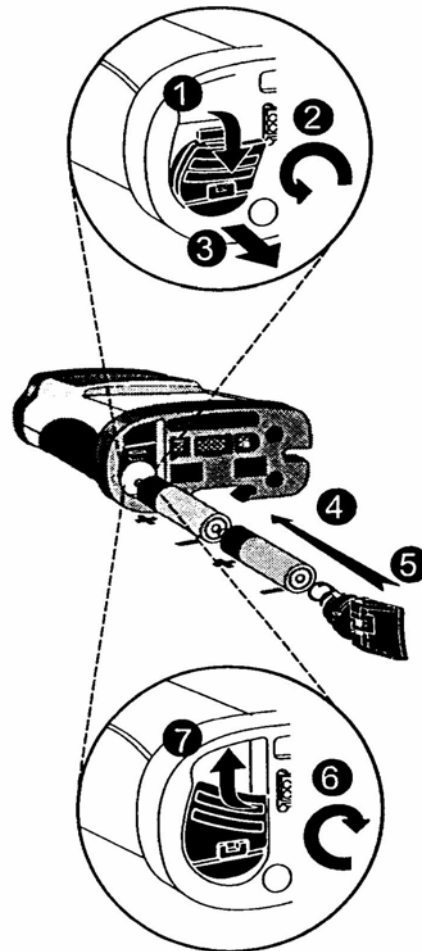
If you need to remove air from the IV tubing:

1. Press the **[SILENCE]** key if the pump is alarming. Then press the **[STOP]** key.
2. Disconnect the IV tubing from the patient. Keep the end of the locking blunt cannula sterile. If the tubing is dropped or touches any unsterile object, you will need to change the locking blunt cannula.
3. Press the **[PURGE]** key. Make sure to disconnect IV tubing from the patient.
4. Press and hold the **[PURGE]** key until the air is removed from the IV tubing. Once all the air is removed, release the **[PURGE]** key.
5. When the priming is complete (there is no air in the IV tubing), press the **[YES/ENTER]** key to return the pump to the stop mode.
6. **Vigorously** scrub the end of the catheter cap with an alcohol wipe and reinsert the locking blunt cannula.
7. Press the **[START]** key and follow the instructions on the screen.

CHANGING THE BATTERIES







The Gemstar® pump requires two AA-size batteries. If you need to change the batteries, always replace both batteries. To insert or replace batteries:

1. Press the **[SILENCE]** key.
2. Press **[STOP]** key.
3. Flip the tab on the bottom of the pump. (#1 on the diagram)
4. Hold onto the tab and turn the battery door to the left (#2 & 3 on diagram).
5. Remove the old batteries and insert new batteries.
6. Replace the battery door (#5 on the diagram).
7. Turn the door to the right (#6 on diagram).
8. Make sure the battery door is secured under the slot.
9. Flip down the tab of the battery door to lock in place (#7 on diagram).
10. Make sure battery door is flush with the bottom of the pump.
11. Screen on pump will display after new batteries inserted: **UNIT SELF TEST IN PROGRESS**
12. **USING BATTERIES** Press **[ENTER]**
13. Press # **[1]** key to **RESUME PROGRAM**
14. Press the **[Start]** key to restart your infusion.



INFUSION PUMP GUIDE

Listed below are some important keys on your infusion pump. You will need to become familiar with these keys in order to operate your pump.

Pump key	What it does
	<p>Press the [START] key to begin your infusion. As the pump delivers the medication, you will see the amount infused displayed on the screen.</p>
	<p>The [YES/ENTER] key allows you to enter the correct program to infuse your medication. The screen will tell you when to press this key.</p>
	<p>If you need to stop your pump, press the [STOP] key.</p>
	<p>To quiet an alarm, press the [SILENCE] key. The screen will tell you what the alarm means.</p>
	<p>Press the [HELP] key if you are unsure as to how to correct the alarm problem. Step-by-step instructions will guide you on how to correct the alarm condition. Displays shift totals.</p>
	<p>Press the [BACK-UP] key to exit the help screen or to return to the previous screen.</p>

ALERTS, ALARMS AND TROUBLESHOOTING

The GemStar® pump uses screen messages and audible beeps to let you know about conditions that need your attention. Below you will find some of the most common alerts and alarm messages displayed by the pump and tips on how to solve the problem.

Screen Display	Cause	Solution
LOW BATTERIES	Pump detects drop in battery power	<ol style="list-style-type: none"> 1. Press the [SILENCE] key 2. Press [STOP] key 3. Replace batteries
START	Pump is programmed but has remained in the stop mode for more than 3 minutes	<ol style="list-style-type: none"> 1. Press the [SILENCE] key 2. Press the [START] key or turn the pump off
CHECK CASSETTE	Cassette not installed, or installed improperly	<ol style="list-style-type: none"> 1. Press [SILENCE] key 2. Press [STOP] key 3. Reinstall the cassette 4. Press [START] key to begin infusion.
DIST. OCCLUSION	A blockage has been detected in the IV tubing BELOW the pump (i.e. between the pump and the catheter)	<ol style="list-style-type: none"> 1. Press the [SILENCE] key 2. Press the [STOP] key 3. ✓ IV tubing for kinks or blockages BELOW the pump and correct 4. ✓ that all clamps are open 5. Press firmly down on the cassette 6. Press the [START] key
END OF INFUSION	Pump has delivered container amount programmed	<ol style="list-style-type: none"> 1. Press the [SILENCE] key to mute alarm for 2 minutes 2. Clamp your catheter 3. Press the [STOP] key 4. Flush catheter
Screen Display	Cause	Solution

<p>PROX. OCCLUSION</p>	<p>A blockage has been detected in the IV tubing ABOVE the pump (i.e. between the pump and the medication container)</p>	<ol style="list-style-type: none"> 1. Press the [SILENCE] key Press firmly down on the cassette. 2. Press the [STOP] key 3. IV tubing for kinks or blockages ABOVE the pump and correct 4. that all clamps are open 5. for blockage in the bag and IV spike 6. Press the [START] key
<p>AIR-IN-LINE</p>	<p>Air has been detected in line</p>	<ol style="list-style-type: none"> 1. Press [SILENCE] to mute alarm for 1 minute 2. Press [STOP] 3. Check line connections Disconnect IV tubing from patient and follow the prime procedure 4. Reconnect the pump set to the patient-access device 5. Press [START] to begin delivery

INFUSION PUMP CARE

1. **DO NOT** place the pump in any fluids or cleaning solutions.
2. **AVOID** dropping or hitting the pump. If the pump is dropped or hit, always recheck the program.
3. **NEVER** use sharp objects such as pens, pencils, fingernails, paper clips or needles to clean the pump.
4. *HomeMed* will check your pump every year. Please call if you believe it has been longer than a year without being serviced.
5. If the pump needs cleaning, use a soft cloth dampened with a mixture of household bleach and water (1 part bleach to 10 parts of water). Clean the pump optics surface (across from the pump latch in the cartridge channel), with a cotton swab moistened with the bleach solution at least once a month. Dry the pump after cleaning.
6. You may wash the backpack in regular detergent in your washing machine. After washing, dry under low heat in your dryer.



7. **NEVER** use the pump in the presence of flammable or explosive vapors.
8. **ALWAYS** avoid sources of high intensity electromagnetic radiation such as X-ray machines. While infusing medications with the GemStar® pump stand at least 10 feet away from cell phones or two-way radios that are being used.

FAST FACTS

FLUSHING:

**DO NOT FLUSH YOUR LINE UNLESS
INSTRUCTED TO DO SO BY A CLINICIAN**

Resource numbers:

Call HomeMed if you have questions about **pump** or **supply** problems or if the instructions are unclear to you. Our **24 hour** number is:



1-800-862-2731

Organize Yourself!!

Remove bag from refrigerator if needed 2 hours before using

Wash your hands

Spike medication bag with tubing

Place IV tubing into pump

TO CHANGE YOUR BAG WHEN REUSING IV TUBING:

Press **[STOP]** key. You will see the following screens:

Press the **[CHANGE]** key

Press the # **[1]** key –New Container

Press the **[START]** key

TO CHANGE IV TUBING:

Turn pump on. You will see the following screens:

Self test

Using batteries, press **[YES/ENTER]** key

Press # **[1]** key - RESUME PROGRAM

Review program by pressing the **[▼]** key

Press the **[YES/ENTER]** if program correct

Press the **[PURGE]** key to prime tubing

Once you have finished priming the tubing:

Press the **[CHANGE]** key

Press the # **[1]** key –New Container

Connect IV tubing to catheter

Open catheter clamp and press the **[START]** key