

# How to Set Up and Infuse Your TPN

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**Important: Do not change any of the supplies listed here.  
Keep supplies away from children.**

Only your home care nurse or persons trained by Fairview Home Infusion may give you IV medicines. If an untrained person gives you IV medicine, this could cause serious problems, including death. Call your nursing service if someone needs training.

Use these instructions with every infusion.

If you have any problems with your infusion, please call us.

**Fairview Home Infusion**

612-672-2233 or 1-800-642-8845

**Remember:**

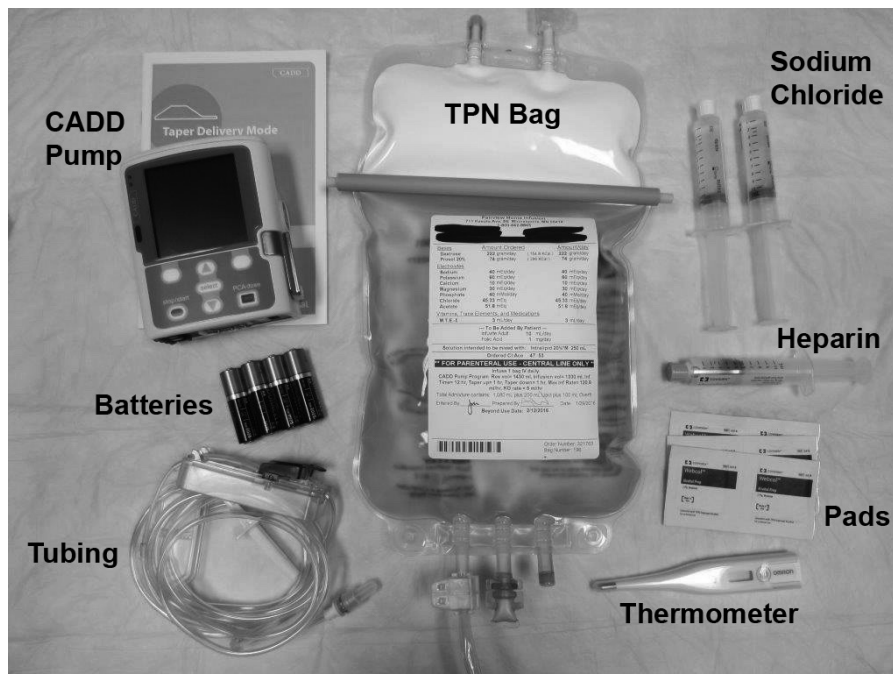
- Wash your hands before touching supplies.
- “Scrub the hub”—Clean the end cap on your IV line for 15 seconds before connecting to it.

## Getting ready

1. Remove the TPN bag from the refrigerator 6 to 8 hours before use. This allows time for the contents to warm up to room temperature. Do **not** warm the bag in the microwave, with direct sunlight or hot water. Let it warm up naturally.
2. Read the label on the TPN bag. Check for your name and the discard, or use-by, date. If the date has passed or any part of the label is wrong, do **not** use the TPN. Call your Home Infusion pharmacy team.

### 3. Gather these supplies:

- IV tubing with 1.2 micron filter
  - TPN/Lipid bag at room temperature
  - CADD pump, instructions and 4 AA batteries
  - Two syringes of 0.9% sodium chloride (saline solution)
  - One syringe of Heparin Lock Flush or citrate (if needed)
  - Thermometer
  - Alcohol pads (for cleaning ports and medical equipment)
  - Alcohol or bleach wipes (for cleaning the table)
4. Wash your hands well for 15 seconds with liquid soap and water or hand foam.
  5. Check your temperature and record it.



Gather these supplies to set up and infuse your TPN

## ❑ Adding insulin or vitamin K to the TPN bag (add before multi-vitamins)

1. Gather these supplies:
  - Alcohol pads
  - Prefilled insulin syringe and one-inch (22 gauge) needle that came with the syringe
  - Prefilled vitamin K syringe and the needle that came with it in the brown plastic bag
  - Your TPN bag

If you are adding insulin *and* vitamin K, add the insulin first.

2. Wash your hands well for 15 seconds. Use liquid soap or hand foam.
3. Read the label on the syringe. Check to be sure your name, the medicine name, and the dose are correct. Also check the discard, or use-by, date. If the date has passed or any of the information is wrong, do **not** use the syringe. Call your Home Infusion pharmacy team.
4. Take the plastic cover or rubber tip off the syringe. Do **not** touch the tip.
5. Attach the needle to the syringe by twisting it on.
6. With a fresh alcohol pad, scrub the short rubber or plastic port at the bottom of your TPN bag. Scrub for 15 seconds and let air dry.
7. Take the cover off the needle by pulling it straight off. Do **not** twist it off and do **not** touch the needle.
8. Insert the needle into the port. Inject (push) all of the liquid into the bag. Remove the needle and syringe from the port.
9. Throw the empty needles and syringes into your sharps container.
10. If you are adding vitamin K, repeat steps 3 to 9.

## ❑ Adding vitamins to the TPN bag

1. Gather these supplies:
  - Alcohol pads
  - Two vials of vitamins with caps of different colors.
  - Two 10-ml syringes with needles
  - TPN bag



### Supplies for adding vitamins to your TPN

2. Wash your hands well for 15 seconds. Use liquid soap or hand foam.
3. Open one vial.
4. Use a fresh alcohol pad to scrub the top of the vial. Scrub for 15 seconds and let air dry.
5. Use a fresh alcohol pad to scrub the short rubber or plastic port at the bottom of your TPN bag. Scrub for 15 seconds and let air dry.
6. Take the cover off one of the needles by pulling it straight off. Do **not** twist it off and do **not** touch the needle.
7. Draw back the plunger to fill the syringe with 5 ml air. For children's multivitamins, follow your nurse's instructions.

8. Use the tip of the needle to pierce the center of the opened vial. Push all the air into the vial.
9. Keep your thumb on the plunger of the syringe. Turn the vial upside down, and then withdraw all the liquid from the vial.
10. Tap the side of the syringe, moving any air bubbles to the top. Inject these back into the vial. This way, you will make sure that all the air is out of the syringe. It's okay to have tiny bubbles on the inside of the syringe.
11. Remove the needle and syringe from the vial.
12. Insert the needle into the center of the port. Push all of the liquid into the bag. Remove the needle and syringe from the port.
13. Throw the empty needle and syringe into your sharps container.
14. Take up the second syringe and vial. Repeat steps 3 through 13.

## ❑ Mixing lipids and TPN

If your TPN bag has a lipid chamber (with white, milky liquid), check these things before using it:

- The white liquid at the top should look like milk, without brown streaks or cracking.
- The liquid at bottom will look clear or slightly yellow. It should **not** look murky or milky or contain any solid pieces.
- If you notice anything unusual, do **not** use the TPN. Call your Fairview Home Infusion team.

After you complete the above checks, mix the two chambers. Do this just before hooking up your TPN for the day:

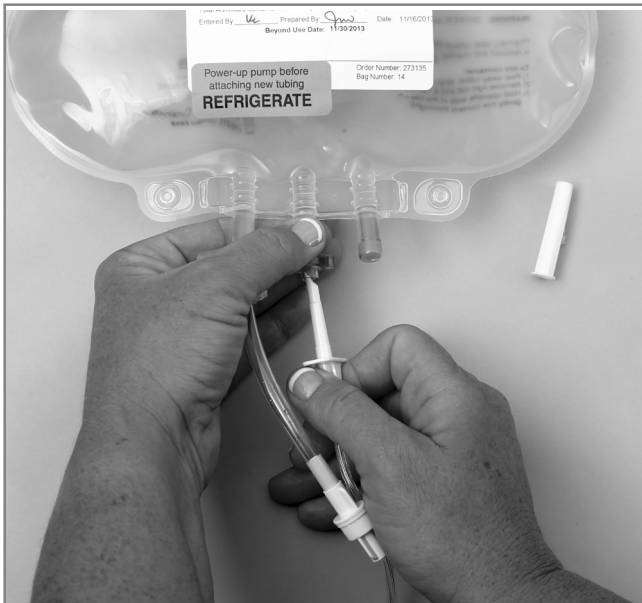
1. Pull on the rubber tube, then pull the silver strip from between the two chambers.
2. Gently knead the bag until the liquids are well mixed. Once mixed, TPN is only good for 24 hours.



**Pull the silver strip  
from between the two chambers**

## Attaching the tubing

1. Remove the IV tubing from its package. Pull the blue clip from the cassette, then tear off the white paper strips.
2. Holding the TPN bag, remove the seal from the large middle port at the bottom of the bag. Once the seal is removed, do **not** touch or clean the open port. Do **NOT** use the clamped port.
3. Take the cover off the tubing spike. Push and twist the spike into the middle port of the bag. Don't let either the port or the spike touch anything.



**Twist the spike into the middle port**

## CADD pump setup and operation; priming your tubing

1. Make sure the pump is stopped and powered off. Using your fingers, the pump key or a coin, turn the knob on the battery door counterclockwise to open the battery door on the top of the pump. **Note: If the batteries are already in place, go to step 4.**
2. While holding the pump at an angle, place 4 AA batteries in the pump from the bottom up. Match the + and - markings on the batteries with the markings on the pump.



**Insert AA batteries from the bottom up, matching the + and- markings**

3. Using your fingers, the pump key or a coin, close the battery door by turning the knob on the battery door clockwise.
4. Press and hold the power switch to turn the pump on.
5. The pump will beep after completing self-tests and “Ready To Begin” will appear on the home screen.

6. Open the cassette latch to a 90 degree angle.



**Open the cassette latch to a 90° angle**

7. Attach the TPN tubing cassette to the pump by connecting the hooks on the cassette to the hinge pins on the bottom of the pump.
8. Place the pump on a firm, flat surface and press down on the cassette so it fits tightly against the pump.
9. Lift the cassette handle into the closed position.



**Lift the cassette handle into the closed position**

10. Make sure the cassette is attached correctly. The top of the cassette should line up evenly with the bottom of the pump and be securely attached.
11. If the screen says “Reset Reservoir volume to \_\_\_ml” select **Yes**. The pump will reset to the volume needed to run your TPN for the day.

12. “Prime tubing?” will appear on the home screen. Select **Yes**.
13. “Disconnect tubing from patient, open clamps, then press ‘Prime’” appears on the home screen. Select **Prime**. Let the filter hang straight down while priming.



**Let the filter hang straight down**

14. When the liquid reaches the end of the tubing, select **Stop priming**. If “Continue priming” appears on home screen select **No**.
15. “Start infusion” will appear on the home screen. Select **No**.

16. At this point, make sure that the Reservoir Volume number in the left corner of the status bar at the top of the pump screen matches the number on the TPN label. The bag label will say “Res Vol” instead of Reservoir volume.



The Reservoir Volume number is in the top left corner of the pump screen

**Note:** If you primed the tubing, your pump may be 10 to 20 ml lower than the amount listed on the bag. In this case, you don't need to reset the volume.

### Reset reservoir volume by hand

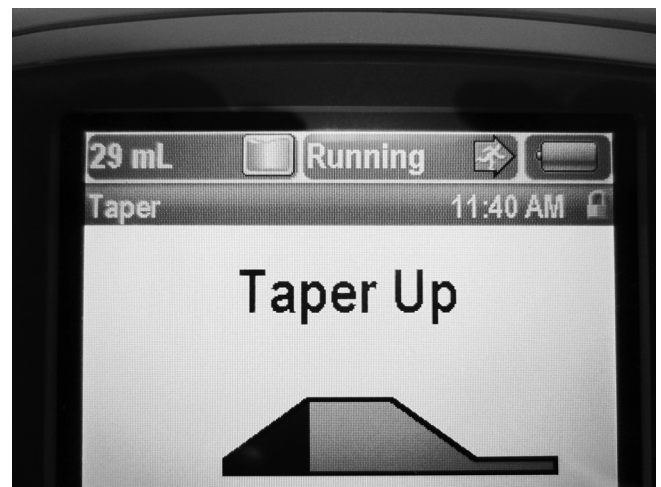
1. Select **Tasks**.
2. Select **Reset Reservoir Volume**.
3. “Reset reservoir volume to \_\_\_\_ml?” will appear on the home screen. Select **Yes**.
4. Select **Back** to return to the home screen.
5. Double check that the reservoir volume on the screen matches the Res Vol on your TPN label. If the reservoir volume on the screen and Res Vol on your TPN label match, you are ready for “Connecting and infusing TPN.”

**Warning:** If the reservoir volume on the screen still does **not** match the Res Vol on your TPN label, **STOP**. Do *not* infuse your TPN bag. Call your Fairview Home Infusion team.

### Connecting and infusing TPN

You are now ready to hook up and start your TPN.

1. Set the pump and TPN bag aside.
2. Use a fresh alcohol pad to scrub the end cap on your IV line. Scrub for 15 seconds and let air dry.
3. Open the clamp on your IV line, if you have one. “Pulse” flush your IV line with one syringe of 0.9% sodium chloride.
4. Use a fresh alcohol pad to scrub the blue cap on your IV line again. Scrub for 15 seconds and let air dry.
5. Twist the plastic cover off the end of the TPN tubing. Do not touch the end of the TPN tubing. Insert the tubing into the blue cap on your IV line. Twist to secure the tubing, just like your nurse showed you.
6. Begin the infusion.
  - Press the **stop/start** button. “Start pump?” appears on the screen. Select **Yes**.
  - The word “Running” will appear in the status bar at the top of the pump screen and the green light will blink while the pump is infusing.



“Running” appears in the status bar at the top of the pump



7. One (1) hour after you start the TPN, take your temperature and write it down. Call Fairview Home Infusion if your temperature is 2 degrees higher than your baseline temperature or if you have chills while infusing.

## End of infusion

Your nurse will tell you how many hours your TPN will run.

When your TPN infusion is done, the pump will alarm and “Reservoir volume low” or “Infusion complete” will appear on the screen.

- If “Reservoir volume low” is on the screen, select **Acknowledge**. “Infusion complete” will appear on the screen. Select **Acknowledge**.
- If “Infusion complete” is on the screen, select **Acknowledge**.

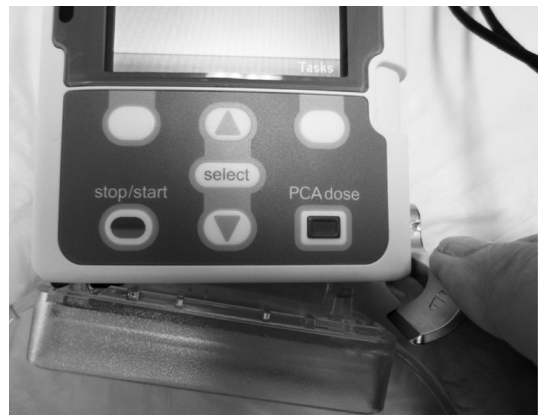
If you don't disconnect now, the pump will switch by itself to KVO rate (very slow). It will stay at this rate until you are ready to disconnect, or until the reservoir volume reaches “0.”

**Note:** You can stop the infusion anytime the pump is in KVO rate.

### **To disconnect...**

1. When you are ready to disconnect, press the **stop/start** button. “Stop infusion?” will appear on the screen.
2. Select **Yes**. “Stopped” will appear on the status bar at the top of the pump screen, and the amber light will blink.
3. Close the clamp on your IV line if you have one.
4. To remove the TPN tubing from your IV line, hold the blue cap and twist off the tubing.
5. Use a fresh alcohol pad to scrub the blue cap on your IV line. Scrub for 15 seconds and let air dry.

6. Open the clamp on your IV line if you have one. “Pulse” flush your IV line with one syringe of 0.9% sodium chloride.
7. Before you remove the empty syringe, close the clamp if you have one. **Go to step 9 unless you are using heparin or citrate.**
8. **If you were told to flush with heparin or citrate,** follow these steps: (Otherwise, skip to Step 9.):
  - Scrub the end cap with a fresh alcohol pad for 15 seconds.
  - Twist on the heparin or citrate syringe.
  - Open the clamp on your IV line, if you have one.
  - “Pulse” flush your IV line.
  - Close the clamp on your IV line, if you have one. Twist off the syringe.
9. Remove the tubing cassette from the pump by pushing down on the cassette latch until the cassette unlatches.



**Push down on the cassette latch until the cassette unlatches**

10. Press and hold the power switch to turn the pump off. “Power down?” will appear on the screen. Select **Yes**. Do NOT turn the pump off before you remove the tubing cassette.
11. Open the door to the battery compartment and remove the batteries.
12. Throw your used supplies in the trash, including the batteries.

