



NATIONWIDE CHILDREN'S
When your child needs a hospital, everything matters.™

Helping Hand™

Health Education for Patients and Families

IV (Intravenous) Therapy

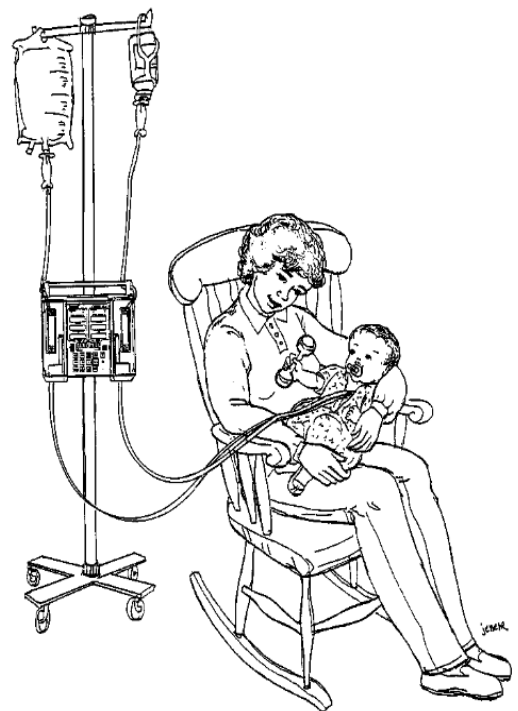
IV or intravenous (in-trah-VEE-nus) therapy is a way to give fluids, medicine, nutrition, or blood directly into the blood stream through a vein. IV therapy uses a type of tiny plastic tubing (cannula) that goes into the vein, a needle, and plastic tubing that connects the set-up to a bag of fluid. All together, the pieces are called an "IV."

IV fluid often contains water, glucose (sugar), and electrolytes (potassium, sodium, and chloride). An IV may allow more than one fluid to be given at the same time and into the same place (Picture 1).

Your doctor will decide what type of fluid your child needs, the amount, and how fast (flow rate) it is given. The decision is based on your child's weight and condition.

Starting the IV

- A tiny plastic tube (the cannula), is placed into a vein in your child's hand, arm, or foot. There is a needle inside the tube that helps guide it into the vein.
- Your child will feel a little "stick" when the needle first goes through the skin. This needle is removed once the cannula is in the right place.
- The rest of the tiny tubing you see is taped to the skin to keep the cannula in place.
- The outside open end of the tiny tubing is then connected to a larger tube and hooked to a bag of fluid. The IV can now carry fluid from the IV bag into the vein (Picture 1).
- Your child should not feel pain when the cannula is in the vein unless it moves. To



Picture 1 IV Therapy can give fluids, medicine, nutrition or blood into the vein.

prevent this from happening, a padded board may be taped under the arm or leg to prevent the limb from bending. Bending may also hurt the vein and can cause the IV to come out.

- Sometimes an IV is only needed for a few minutes to give a medicine. In this case, a special kind of needle, without a cannula, may be used. The needle is removed as soon as the medicine is given.
- For a child less than 1 year of age, sometimes the cannula is placed in a vein in the scalp just under the skin. To do this, the veins must be easy to see. If your baby has a lot of hair, it may need to be clipped to see the veins better. Once the cannula is in place, it is taped to the scalp to keep it still. If the veins are not easy to see, the IV may have to be started more than once. We will be sure to consider how stressful this is for you and your child.
- An IV will be taken out if there are any signs of problems.

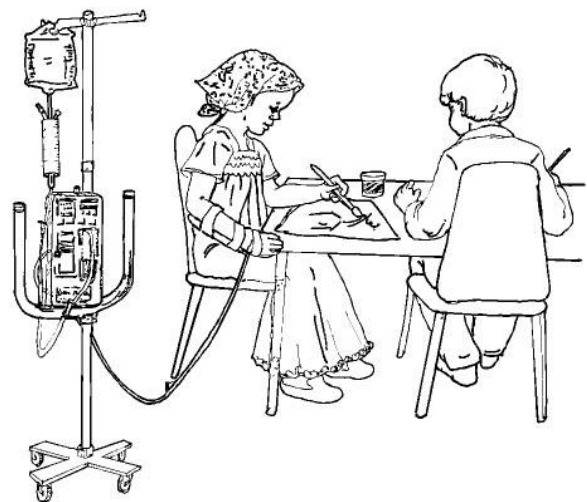
Care of a baby with an IV

At first, you may feel awkward when you hold your baby. It will get easier very quickly.

- Hold, cuddle and play with your baby as much as possible. Even with an IV, the baby can still play.
- When you bathe your baby, do not let the cannula and taped areas get wet. Ask the nurse to help you wrap the IV before bathing.
- You may need to gently hold your baby's hands at times to keep the IV from moving.
- When you put your baby back in the crib, make sure the IV tubing is not caught, pulled or blocked. Check to see if your baby is lying on the tubing. Drape the tubing over the side rail of the bed so that it hangs free.
- If the IV is in your baby's foot, do not let them stand up.
- If the IV is in your baby's scalp, do not lay their head on the side where the IV is.

Care of a child with an IV

- Your child can still play, read, and do things they like with an IV (Picture 2).
- When your child bathes, do not let the cannula or taped areas get wet. Ask the nurse to show you ways to do this.

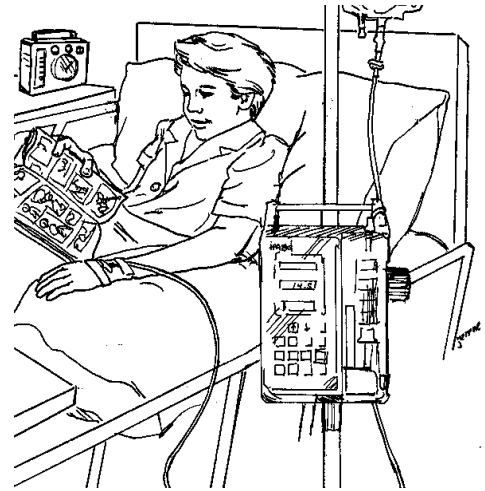


Picture 2 Your child can do things they like to do.

- When your child gets in and out of bed or walks around, be sure the tubing is not caught, pulled, or blocked.
- Your child should take care to not sit or lie on the IV tubing.

How the fluid rate is controlled

A machine called an infusion pump controls how much fluid goes into your child's vein each hour (Picture 3). The IV tubing is threaded through the pump. The pump is programmed to the speed (flow rate) needed to give your child the right amount of fluid. If the flow rate changes, the machine senses it and sounds an alarm. This alarm alerts the nurse to correct the flow rate.



Picture 3 An infusion pump controls how much fluid goes into the vein.

While the IV is in the vein

The nurses will check on your child every hour whether awake or asleep. They will touch, look, and compare the IV site to the other arm, leg, or side of the scalp to make sure that there are no problems. The two most common problems are:

- Infiltration. This is when the cannula comes out of the vein and the IV fluid goes into the skin tissue instead of the vein.
 - Signs of infiltration include puffiness, redness, or pain. These signs will go away after a little while.
 - If infiltration happens, the IV is removed and restarted in a different place.
 - The nurse may apply warm or cold compresses to the site to help reduce the puffiness.
- Irritation of the skin around the IV site or inside the vein (phlebitis).
 - Signs of skin irritation and phlebitis are redness, itching, puffiness, or pain.
 - Fluids most likely to cause phlebitis are antibiotics, calcium, and nutritional formulas (parenteral nutrition - PPN or TPN).
 - If irritation or phlebitis occurs, the IV is removed and restarted in a different place.
 - The nurse may apply warm compresses to the site to soothe your child.

When to call the nurse

Be sure to call the nurse if:

- The alarm on the pump goes off.
- Your child pulls or tugs on the tubing.

- You notice blood in the tubing.
- The tubing pulls apart.
- The tape that holds the tube in place comes loose.
- The IV site looks red or puffy.
- The site appears wet.
- Your child is complaining that the IV hurts.

When the IV is taken out

When your child no longer needs the IV, the nurse will remove the tape and take out the cannula. Peeling off the tape will feel like taking off a Band-Aid®. Your child may feel a little pinch when the cannula is pulled out.

- There will be a tiny mark where the IV was placed and maybe a little bleeding. The nurse will apply pressure to stop the bleeding and may put on a Band-Aid. For infants or toddlers, the Band-Aid will be removed as soon as bleeding stops to prevent choking risk and skin injury.
- If a padded board was used to keep the limb still, your child's arm or foot may feel a little stiff. This will get better as your child moves around.

If you have any questions, please ask the nurse or doctor.