Erythropoietin for Treating Anemias

Erythropoietin is a medication used to treat anemias that develops from kidney failure, bone marrow disease, or chemotherapy. (See "Iron Deficiency Anemia" CARE CARD.)

Erythropoietin helps to increase the number of red blood cells in the body. Erythropoietin replaces hematopoietin and makes the bone marrow produce red blood cells. Erythropoietin depends on good nutrition and plenty of iron. It can usually decrease a child's need for a blood transfusion (RBC's and platelets.)

Red blood cells (RBC's) carry oxygen from the lungs through the heart and then to the rest of the body. The kidneys remove toxins (waste) from the blood and measure the amount of oxygen in the blood. If there is not enough oxygen in the blood, the kidneys produce a hormone called hematopoietin. Hematopoietin tells the bone marrow to make more red blood cells. Erythropoietin is a man-made hormone. It is made to be like hematopoietin.

Erythropoietin gives the bone marrow the same message to make red blood cells. Sometimes it gives other messages as well. For instance, the number of blood cells that help with clotting (called platelets) can increase because of Erythropoietin.

How to Give:

- Erythropoietin is given by an injection, either subcutaneously (under the skin) or intravenously (into a vein) through a venous catheter. (See "Medication Administration - Giving a Subcutaneous (SubQ) Injection" CARE CARD.)
- Do not shake the vial when drawing up medication.
- Check the medication for color changes and floating particles. If these are seen, call your pharmacist. Also verify the strength of the medicine on the vial(s) provided since the amount drawn into the syringe is based on this.
- The medication must be refrigerated. Do not freeze. Warm the medication by gently rolling the vial between your hands (but do not shake) before drawing it up into the syringe.

Special Instructions:

- Your child will have frequent blood tests to check the amount of red cells in his blood. It usually takes about 2 to 6 weeks of Erythropoietin injections before the number of red blood cells begin to increase.
- The bone marrow will make red blood cells only when there is enough iron in the body. Your child’s doctor may prescribe an iron blood test to test the body’s iron level. The doctor may also prescribe an iron supplement.
- Your child’s blood pressure may increase as the number of red blood cells increase. The doctor may prescribe new medication to control the increase in blood pressure or decrease the Erythropoietin dose. Check your child’s blood pressure ________ time(s) per day. (See "Home Monitoring of Blood Pressure" CARE CARD.)
Common Side Effects:

- Increased appetite – if your child is a dialysis patient, he should follow the special kidney diet recommended by his doctor/dietician.
- Pain at the injection site (if given subcutaneously) – use of topical anesthetic cream, to numb the skin, may minimize this. (See "Topical Anesthetic Creams" CARE CARD.)
- Muscle and bone pain
- Coldness
- Sweating

Side Effects to Report Immediately:

- Shortness of breath
- Severe and frequent headaches
- Skin rash, hives
- Seizures
- Diarrhea
- Irregular heart beat
- Blood pressure greater than _______/_______ mmHg
- CALL 911 IF YOUR CHILD IS HAVING DIFFICULTY BREATHING.

Special Considerations:

- Let your child’s doctor and pharmacist know if your child is taking other medications or has an allergy to any medications.
- Tell your child’s doctor and pharmacist if your child is taking any vitamins, herbal products, or nutritional supplements.
- Keep the medication in its original container and away from sunlight, heat, and dampness.
- Give only the amount of medication prescribed by your child’s doctor
- Call your child’s doctor pharmacist before giving your child any over-the-counter medications.

Call your child’s doctor, advanced practice nurse, or dialysis nurse on call at (816) 234-3188 if:

- Your child has any of the side effects listed above.
- You have questions or concerns about your child and this medicine.

Call the Poison Control Center at 1-800-222-1222 if:

- Too much medication is taken.
- Medication is taken accidentally.