Anemia and Aranesp® (darbepoetin), Epogen® (epoetin alfa), and Procrit® (epoetin alfa)

**What is anemia?**¹,²
Anemia is a condition that occurs when your body does not have enough red blood cells. Red blood cells carry oxygen to all the parts of your body. Low levels of red blood cells can make you feel tired and/or weak. Anemia is diagnosed through blood tests where the levels of red blood cells and other parts of the blood are measured. Anemia can be a temporary or long-term condition, and it can vary from being mild to severe.

**What are some symptoms of anemia?**¹
The signs and symptoms of anemia are different for everyone. They may include:
- Chest pain
- Cold hands or feet
- Difficulty thinking clearly, concentrating, or remembering
- Dizziness
- Fast or regular heartbeat
- Feeling tired and/or weak
- Headaches
- Pale skin
- Shortness of breath

These symptoms may be mild or unnoticeable at first. They tend to become more severe as anemia worsens.

**What causes anemia?**¹⁻³
There are several causes of anemia, including:
- Low levels of iron, vitamin B12, and/or folic acid. This may occur because you:
  - Do not eat enough food that contains iron or vitamins, such as spinach and beans
  - Cannot absorb enough nutrients because of conditions such as Crohn’s disease or Celiac disease
- Chronic (long-term) diseases can lead to low level of red blood cells, such as:
  - Human immunodeficiency virus (HIV)
  - Rheumatoid arthritis
  - Crohn’s disease
Kidney disease: People with kidney disease may not make enough erythropoietin, a hormone that tells your body to make red blood cells.

- Certain types of cancer and some cancer treatments (such as chemotherapy and radiation) can prevent your body from making new red blood cells.
- Blood loss due to injury or surgery.

How is anemia treated?1-9

Treatment depends on the type of anemia that you have. Table 1 lists the different treatments that are available

Table 1. Medicines Used to Treat Anemia

<table>
<thead>
<tr>
<th>Medicine</th>
<th>What You Should Know</th>
</tr>
</thead>
</table>
| Iron, vitamin B₁₂, and/or folic acid supplements | • Many formulations are available, including injections and pills that you can take by mouth  
• You may be taking these supplements for a short or long period of time |
| Aranesp® (darbepoetin alfa)                   | • These medicines are used to treat anemia that is caused by chemotherapy, kidney disease, or certain HIV/AIDS drugs.  
• Also used to lessen the need for blood transfusions during surgery  
• Work just like the erythropoietin hormone that your kidneys make  
• Given as an injection under the skin or infused through the vein  
• You may need to take iron along with your medicine to help it work |
| Epogen® (epoetin alfa)                        |                                                                                      |
| Procrit® (epoetin alfa)                       |                                                                                      |
| Packed red blood cells transfusion            | • The blood is transfused using a tube that is connected to your vein by a needle  
• Reserved for people who have low or unstable blood pressure, or need oxygen in organs such as brain or lungs  
• You will most likely get the transfusion in a hospital or outpatient clinic  
• One unit of blood takes about 2-3 hours to transfuse |

You may not notice any changes in the way you feel for several weeks because it takes time for the medicine to work, and for your body to make new red blood cells.
How will my doctor know if my medications are working?

Your doctor will order blood tests to see if your hemoglobin level is improving. These tests will show how well your medication is working. Depending on the hemoglobin level, your doctor may decide to increase or decrease the drug dose or stop treatment. It is important to keep all appointments with your doctor and for your blood tests.

What are the side effects of Aranesp, Epogen, or Procrit?6-12

Side effects of Aranesp, Epogen, or Procrit are usually mild. Many side effects may be caused by other medical conditions, such as cancer or kidney disease.

Common side effects

- Cough
- Diarrhea
- Fever
- Headache
- Itching
- Joint, muscle, or bone pain
- Mouth soreness
- Nausea
- Stomach pain
- Rash
- Vomiting
- Redness and pain around the area of injection

Aranesp can also cause swelling caused by a large amount of fluid build-up in your body’s tissue commonly in the legs and feet

Table 2. Serious side effects

<table>
<thead>
<tr>
<th>Serious Side Effects</th>
<th>What You Should Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergic reactions</td>
<td>• Get medical help right away if you have an allergic reaction</td>
</tr>
<tr>
<td></td>
<td>• Signs and symptoms may include:</td>
</tr>
<tr>
<td></td>
<td>▪ Rash</td>
</tr>
<tr>
<td></td>
<td>▪ Shortness of breath or wheezing</td>
</tr>
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<td></td>
<td>▪ Swelling around your eyes or mouth</td>
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<tr>
<td></td>
<td>▪ Fast heart rate</td>
</tr>
<tr>
<td>Antibodies</td>
<td>• Talk to your doctor if you experience any signs and/or symptoms of anemia while taking your medicine</td>
</tr>
<tr>
<td>High blood pressure, especially in patients who already have high blood pressure</td>
<td>• Talk to your doctor about monitoring your blood pressure</td>
</tr>
<tr>
<td></td>
<td>• If your blood pressure is high, your doctor may prescribe a medicine to control your blood pressure</td>
</tr>
</tbody>
</table>
### Low blood pressure during dialysis
- This side effect can occur with Aranesp
- Let your doctor or the nurse in the dialysis unit know right away if you experience low blood pressure
- Signs and symptoms may include:
  - Dizziness
  - Lightheadedness
  - Feeling tired
  - Cold and sweaty skin
  - Blurred vision
  - Nausea

### Seizures
- Let your doctor know if you have had seizures in the past
- Get medical help right away if you have a seizure while taking your medicine

### Use in newborns, infants, pregnant or breastfeeding women
- Only use Epogen or Procrit that comes in a single-use vial
- Do not give Epogen or Procrit from a multidose vial to newborns, infants, or pregnant or breastfeeding women
- The multidose vial contains benzyl alcohol, which has been shown to cause brain damage, other serious side effects, and death in newborn and premature babies

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**What is the most important thing I should know about Aranesp, Epogen, or Procrit?**

- If you have cancer, talk to your doctor about the risks.
  - Using Aranesp, Epogen, or Procrit may cause your cancer to get worse.
  - Treatment with Aranesp, Epogen, or Procrit should be stopped after you finish your chemotherapy course.
  - You have to sign a patient-healthcare provider acknowledgement form before you can begin taking this medicine.
- Your doctor should use the lowest dose needed. This can prevent the need for blood transfusions.
- Taking this medication may increase your chances of having a heart attack, stroke or heart failure.
• You may get blood clots at any time while taking this medication. Blood clots can occur in the veins, especially in your legs. These blood clots can also travel to your lungs and block blood circulation in the lungs.

• Call your doctor or get medical help right away if you have:
  ▪ Low blood flow through your hemodialysis vascular access
  ▪ Pain in your arms or legs (with or without swelling)
  ▪ A cool or pale area on your arm or leg
  ▪ Chest pain
  ▪ Fainting
  ▪ Trouble breathing
  ▪ Sudden trouble seeing
  ▪ Sudden confusion, trouble speaking, or trouble understanding other people
  ▪ Sudden numbness, or weakness in your face, arm, or leg, especially on one side of your body
  ▪ Sudden trouble walking, dizziness, loss of balance or coordination

**How should I store Aranesp, Epogen, or Procrit?**  

- Make sure you follow proper storage and handling directions that are listed in the “Medication Guide” that came with your medication.
- Your medicine must be stored in the refrigerator. Do not freeze the solution.
- Do not shake the solution.
- Protect the medication from light.
- Single-dose vials and syringes should not be used for more than one dose.
- Make sure you dispose of your used needles in a puncture-resistant container, such as a Sharps container.
- You may continue taking your medicine even when you travel, but they need to be properly stored for you to use them.
  ▪ Keep your medicine cold in a cooler with ice packs. Do not allow the vials or pre-filled syringes to touch the ice packs, or the medicine may freeze. Make sure to keep the medicine at 36-46°F or 2-8°C.
  ▪ Keep the cooler with you on a plane or in a car. Do not check it in as baggage when flying.

**What other resources are available?**

For more information, please contact the following resources:

**OptumRx**
References:
   Cancer Foundation Website. 
   http://www.cancer.net/patient/ASCO%20Resources/What%20to%20Know/What%20to%20Know%20PDFs/W 
4. National Comprehensive Cancer Network. NCCN clinical practice guidelines in oncology: Cancer- and 
   Accessed August 8, 2011.
   American Society of Clinical Oncology/American Society of Hematology clinical practice guideline update. J 
6. Information for healthcare professionals: erythropoiesis stimulating agents (ESA). U.S. Food and Drug 
   Administration Website. 
   http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm109375.h 

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medical condition.