

## Who will give me the EPO needles?

The LHSC Blood Conservation nurse or your Family Doctor's office can give the EPO needles, depending on what is easiest for you.

## How do I get EPO?

The LHSC Blood Conservation nurse can arrange for sending the prescription for EPO to your own pharmacy. Most pharmacies are able to order EPO within 1-2 days. EPO is also available at The Prescription Centre, the LHSC retail pharmacy (locations at University and Westminster campuses).

## How do I store EPO?

EPO must be kept refrigerated. Make sure it doesn't freeze. If you need to take your EPO with you, carry it in a cooler with an ice pack.

EPO needs to be at room temperature for 20 to 30 minutes before the needle is given. If EPO is at room temperature for longer than 60 minutes, it should not be used.

Protect EPO from light by storing it in a box or brown bag.

## How much does EPO cost?

The most common dosage of EPO (1 needle per week for 3 weeks) costs about \$2000.00.

At this time the health care system does not routinely provide EPO for patients having an operation. Private insurance plans may cover some or all of the expense. For some patients, a letter asking for coverage for the cost of EPO can be sent to the Ministry of Health by the Blood Conservation Doctor (some or all of the cost might be covered).

Assistance to find out about possible coverage for the cost of EPO is available.

## My Questions are...

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# PERIOPERATIVE BLOOD CONSERVATION PROGRAM

## Erythropoietin (EPO): Questions and Answers

## **What is Erythropoietin?**

Erythropoietin is a natural hormone made in the kidney. It is one of the things that controls the number of red blood cells made in the bone marrow. Red blood cells or hemoglobin carry oxygen to the body's cells, giving the body's organs energy to work properly and making it possible to carry out daily activities. EPO is a man made protein that acts like your body's own erythropoietin.

## **Which Patients are given EPO?**

Since the late 1980's, EPO is used throughout the world for patients with kidney disease who often have low hemoglobin or anemia. EPO is also used for patients with low hemoglobin due to cancer treatments or AIDS.

Since the mid 1990's, patients having a planned operation can be given EPO to increase their hemoglobin before an operation.

## **What are the Benefits of EPO?**

EPO, by increasing the hemoglobin before an operation, makes it easier for the body to tolerate the blood that will be lost during the operation. Going into an operation with a higher hemoglobin means the patient's hemoglobin does not become as low after the operation, and they are less likely to need a blood transfusion.

Higher hemoglobin at the beginning of an operation may also benefit the use of other blood conservation techniques.

EPO is approved by Health Canada and is widely used throughout the world. Like all medications, treatment with EPO does not have a 100% guarantee. Some patients may not respond to EPO as well, or may lose too much blood and may still need a blood transfusion.

## **What does the Doctor need to know about me?**

As with considering any new medication, tell us your medical history especially: allergies, medications you take, heart problems, high blood pressure, strokes, blood clots, seizures or bleeding problems.

The Blood Conservation Doctor will carefully review your medical history and blood tests. EPO may not be appropriate for you if your blood pressure is not well controlled or if you have had a stroke or blood clot in the past 6 months.

If you are treated with EPO, your Family Doctor will be given information.

## **What are the Side Effects of EPO?**

Allergic reactions are very unlikely, but seek medical attention if you have trouble breathing, hives, itching, a rash, swelling of your throat, face, mouth or tongue.

You might feel a burning discomfort in the area where the EPO needle was given that can last up to 6 hours. Your body might feel tired or ache for 12 to 24 hours after having the EPO. Sometimes blood pressure may increase while taking EPO; blood pressure is checked before each dose of EPO is given.

Be sure to tell us if you have shortness of breath, chest pain, racing of the heart, increase in headaches or unusual headaches, or lightheadedness.

A very rare but serious side effect, Pure Red Cell Aplasia (PRCA) has occurred in a very small number of kidney disease patients who had been taking EPO for long periods of time (months, years). With PRCA, the bone marrow does not respond to erythropoietin and severe anemia develops. The treatment for PRCA might include regular blood transfusions, medications or a bone marrow transplant. It is thought that improper storage of erythropoietin might have been a factor in the development of PRCA but the exact cause is not clearly known.

## **What else do I need to do?**

You must take an iron supplement while being treated with EPO. The EPO and iron work together to make more red blood cells. You will be given a prescription for iron. Please refer to Iron: Questions and Answers brochure.

## **How is EPO given?**

EPO is a clear liquid given to patients by a needle under the skin, like diabetics take their insulin. The most common dose is 1 needle per week for 3 weeks before the operation.