UPMC LIFE CHANGING MEDICINE

PATIENT BLOOD MANAGEMENT

When preparing for surgery, it is good to understand what may occur during and after surgery and how your doctor may help manage blood loss during surgery.

Depending on your surgery, the amount of blood that you may expect to lose will vary. Doctors will work to minimize blood loss and to help you prepare before surgery. However, there are times when patients need to have blood transfusions during or after surgery.

Blood transfusion is a life-saving treatment. Like most therapies, blood transfusion has risks. Your doctors can use different strategies for reducing or eliminating the need for blood transfusions, and that may help reduce risks. This is called patient blood management. You may talk with your doctor about patient blood management and how it may apply to your surgery.

WHY IS PATIENT BLOOD MANAGEMENT DESIRABLE?

- reduces exposure to viruses and other blood-borne diseases
- may reduce the risk of hospital-acquired complications and infections
- may help to reduce length of hospital stay
- conserves use of a precious community resource
- may help to reduce hospital- and patient-care costs

THE ROLE OF BLOOD IN YOUR BODY

Your blood brings oxygen to your organs and tissues. Oxygen is carried and released by a protein in your blood called hemoglobin (sometimes abbreviated Hgb or Hb). Your hemoglobin level shows your body's ability to bring oxygen to your tissues. If your hemoglobin level is low (called anemia), it may lead to the need for a blood transfusion even if you do not lose much blood. If you are going to have surgery, you may want to know if your hemoglobin levels are normal. At UPMC, it is estimated that 25 percent of all patients have low hemoglobin levels before their surgery. A blood test can show your hemoglobin level.

Normal Hemoglobin Ranges

- Male: 14-18 g/dL
- Female: 12-16 g/dL

WHAT CAN BE DONE IF I HAVE ANEMIA? (LOW BLOOD COUNT)

Your physician may put together a plan to address a low blood count by looking at other values in your blood work. The physician may run tests to determine iron levels and the cause of your anemia. In some cases, anemia may be addressed through methods such as iron therapy, taking vitamins (including B12, folic acid), and taking medications that may stimulate the body to produce more blood. Addressing anemia also may involve other specialists, such as a hematologist (blood doctor), nephrologist (kidney doctor), or a gastroenterologist (digestive tract doctor). Finding and treating the causes of your anemia is important. Prolonged or severe anemia may be dangerous to your health. Cooperating with your doctors' efforts to address anemia may offer benefits, one of which may be reducing the need for transfusions during surgery.

BLEEDING AND YOU

Medications such as pain relievers, herbs, and supplements may interfere with blood clotting and may increase the amount of bleeding during surgery. When being evaluated for surgery, be sure to tell your physician about all of the

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medications and herbal supplements that you take. Herbal supplements should be discontinued two weeks prior to surgery. Your doctor can advise which prescription and over-the-counter medications to discontinue and for how long, before your surgery.

PATIENT BLOOD MANAGEMENT IN THE SURGICAL PERIOD

A number of strategies can be used in the operating room to reduce surgical blood loss. Your doctor may use one or more of these strategies during your surgery.

Minimally Invasive Surgery

Surgeries such as laparoscopic surgery and robotic surgery are now performed using smaller incisions. These surgical approaches may result in less blood loss than surgeries that are performed using a larger incision.

Medications, Adhesives, and Tools

Medications that help to decrease bleeding are used in certain surgeries. Surgical tools, such as electrocautery and argon beam coagulation, may be used to help reduce or stop certain types of surgical bleeding.

Blood Cell Salvage and Reinfusion

Blood cell salvage involves the collection of your own blood during surgery. Your blood is concentrated, washed, filtered, and returned to your body. On average, this means that 60 percent of your blood cells can be returned to your body. In some surgeries, blood cell salvage may occur completely in the operating and recovery room areas. In other cases, cleaning and returning your blood may continue after surgery or occur mostly in the postoperative period.

Currently, all UPMC facilities offer intraoperative cell recovery programs and are accredited by AABB in Perioperative Autologous Blood Collection and Administration Standards.

THE CENTER FOR BLOODLESS MEDICINE AND SURGERY AT UPMC

Caring for People Who Decline Transfusions

For some patients, blood transfusion is not an option. Religious beliefs or other concerns may rule out the use of blood transfusions. Patient Blood Management is an important part of the care. UPMC is committed to treating patients with dignity. The staff respects individual patient beliefs and practices, including the refusal of blood transfusions. In keeping with this belief, The Center for Bloodless Medicine and Surgery was established to ensure that patients who refuse transfusions are clearly understood and identified. Patients who cannot accept blood transfusions, or who may be considering surgery at UPMC, may contact The Center for Bloodless Medicine and Surgery prior to an appointment with a physician or hospitalization. Staff at The Center will discuss your desires and treatment. They will help to coordinate care among your doctors and other caregivers.

PLANNING FOR PATIENT BLOOD MANAGEMENT IN YOUR SURGERY

Each type of surgery and every patient are unique. Your doctor will explain the risks and help you to evaluate your case. The following questions may be helpful when talking with your doctor before surgery.

1. What is my hemoglobin level?

   _____

2. If I am found to be anemic, how will you help me increase my hemoglobin before surgery?

   _____

3. Are there medications or supplements that I should stop taking before surgery?

   _____

4. What are the chances that I will need a blood transfusion during this surgery?

   _____

5. What are the risks involved with blood transfusions?

   _____

6. What are the risks if I decline a transfusion?

   _____

7. What steps will my doctor take to minimize or eliminate my need for blood transfusions?

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Contact the coordinators at The Center for Bloodless Medicine and Surgery at UPMC, at **1-877-674-7111**, or visit **www.bloodlesscenter.com.**

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