

## PATIENT BLOOD MANAGEMENT PROGRAMS

A Patient Blood Management program uses a team approach to assess a patient's blood management needs. The goal of the team is to develop a plan of care that uses pharmaceuticals, technology and techniques to decrease blood loss and to enhance blood cell production. This approach reduces or eliminates the need for a blood transfusion.

**SABM'S MISSION** is to improve health outcomes, increase safety and reduce healthcare costs through the advancement of scientific knowledge and practice in patient blood management.

We encourage all individuals to become informed and educated in the management of their blood.

To find a blood management program in your area, visit [www.sabm.org](http://www.sabm.org)



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## A PATIENT'S GUIDE TO PATIENT BLOOD MANAGEMENT

## WHAT IS PATIENT BLOOD MANAGEMENT?

Patient Blood Management (PBM) is the scientific use of safe and effective medical and surgical techniques designed to prevent anemia and decrease bleeding in an effort to improve patient outcomes.



## WHAT DOES PATIENT BLOOD MANAGEMENT ACCOMPLISH?

- Improves patient safety by minimizing exposure to blood.
- Reduces hospital length of stay.
- Minimizes risk of exposure to viruses and other blood-borne diseases.
- Decreases the risk of hospital acquired complications and infections.
- Promotes improved outcomes.
- Enhances quality of life and well-being.

## HOW DO I PROCEED IF MY DOCTOR SAYS I AM ANEMIC?

- Undergo tests to find the cause of anemia.
- Analyze blood to determine iron levels.
- Get information about increasing your blood count with:
  - Iron therapy.
  - Vitamin B12.
  - Folic acid.
  - Vitamin C.
  - Erythropoietin.
- Develop a treatment plan to improve your blood count.

## STRATEGIES TO ENHANCE RED BLOOD CELL PRODUCTION AND MINIMIZE BLOOD LOSS

If you are having a medical procedure, have a complete blood count (CBC) taken well in advance of your procedure date; four weeks prior is recommended. This allows the medical team time to optimize your health status well ahead of hospitalization.

A combination of the following PBM-related strategies may be used:

### BEFORE HOSPITAL VISIT

#### DISCUSS WITH YOUR PHYSICIAN AT LEAST TWO WEEKS BEFORE SURGERY—

Herbal medications, vitamin E, non-steroidal anti-inflammatory drugs (e.g. ibuprofen, naproxen) and medications that affect blood clotting (e.g. warfarin, dabigatran, aspirin, clopidogrel). These may increase your risk of bleeding during procedures.

**SYNTHETIC ERYTHROPOIETIN** – A hormone that stimulates production of red blood cells in your bone marrow.\*

**IRON (ORAL AND INTRAVENOUS)** – A mineral essential for the formation of red blood cells.\*

**VITAMIN B12, FOLIC ACID, VITAMIN C** – Vitamins necessary for red blood cell production.\*

### DURING PROCEDURE

**INTRAOPERATIVE BLOOD CELL RECOVERY AND REINFUSION** – The process of collecting blood lost during surgery and returning it to the patient.

**VOLUME EXPANDERS** – Intravenous fluids made with water, salts, sugars or starches

that help to maintain the correct amount of fluid in the blood vessels.

**HEMOSTATIC DRUG THERAPY** – Medications that assist with the clotting functions of blood.

**ACUTE NORMOVOLEMIC HEMODILUTION** – Removal of a specific amount of blood during surgery, replaced with intravenous (IV) fluids and returned during or after surgery (naproxen) and medications that affect blood clotting (e.g. warfarin, dabigatran, aspirin, clopidogrel). These may increase your risk of bleeding during procedures.

**METICULOUS SURGICAL APPROACH** – Using surgical techniques and instruments that prevent or minimize blood loss.

**ADVANCED/MINIMALLY INVASIVE SURGICAL TECHNIQUES AND DEVICES** – e.g., robotic and laparoscopic surgeries.

**ADVANCED CAUTERIZATION** – Devices that use heat, electricity, vibration, or light to stop bleeding tissue.

**THROMBIN AND ADHESIVES** – Human-derived or synthetic products that can be used in surgery to support the body's ability to clot and reduce bleeding.

### ADDITIONAL STRATEGIES

**REDUCED BLOOD FOR TESTING** – Reducing either the number of times blood is drawn and/or the amount of blood used for testing, thus reducing the risk of anemia.

**POSTOPERATIVE BLOOD CELL RECOVERY AND REINFUSION** – collecting blood lost after surgery and returning it to the patient after it is appropriately processed.

*\*May also be used during or after hospitalization. It is recommended that you discuss these strategies with your physician.*

For a more detailed explanation of these terms, please visit [www.sabm.org](http://www.sabm.org)



## HOW AM I PART OF THE DECISION MAKING PROCESS IN PBM?

There are many strategies to manage the medical issues that result in anemia, clotting problems, or bleeding. For some patients, blood transfusion may never be an option because of medical, religious or other personal reasons. Each person must make an individual decision based on understanding with the assistance of the physician and healthcare team. Here are a few questions you can ask your physician regarding your status:

What are the risks, benefits and alternatives to any proposed treatment, including blood transfusion?

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What are you prepared to do to minimize or eliminate the likelihood of a blood transfusion in my care plan?

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What can be done before, during, and after surgery to reduce my risk for bleeding?

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If I am a patient for whom blood transfusion is NOT an option, what medical or surgical techniques are you planning on employing?

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## THE ROLE OF BLOOD IN YOUR BODY

Red blood cells bring oxygen to your organs and tissues. Oxygen is carried and released by hemoglobin (Hgb), a protein present in red blood cells. A lower than normal hemoglobin level is called anemia. Anemia is a condition that should not be left untreated. If it is severe, or allowed to progress for a long period of time, anemia can add risk to your health.

### KNOW YOUR BLOOD COUNT

Your doctor can test your blood to determine hemoglobin level. Hemoglobin level tells your doctor if your body has enough red blood cells..

### NORMAL HEMOGLOBIN RANGES:

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