Our Team

Our professional staff includes surgeons in every specialty, anesthesiologists, hematologists, pathologists, lab personnel and our dedicated nursing staff who demonstrate a high level of expertise in blood conservation techniques and appropriate anemia management strategies. Our team is concerned with the ethical and medical treatment of patients wishing to choose a blood conservation or a non-transfusion approach to their health care.

Be Prepared

Unforeseen or emergency situations sometimes occur. Feel free to contact us to discuss your bloodless medicine and surgery questions, concerns and wishes, regardless of whether or not you foresee a hospital stay in your near future.

Call 713.441.2177 or visit our website houstonmethodist.org/bloodless-surgery to set up an appointment, attend an educational public program or to obtain additional information.

HOUSTON Methodist® LEADING MEDICINE

Still Have Questions?

Review with your physician or surgeon:

1. Will I need a blood transfusion? If so, why?
2. What are the risks involved with blood transfusions?
3. What are the risks if I choose to minimize or avoid blood transfusions?
4. If I do need a blood transfusion, how will it affect my recovery?
5. If my blood count level is low after surgery, how will it affect my ability to resume normal activity?
6. Will I need to increase my blood count for this surgery?
7. What else do I need to do to prepare myself for surgery?

Please contact our Blood Management and Conservation Program Coordinator at 713.441.2177.

HOUSTON Methodist® LEADING MEDICINE

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HOUSTON METHODIST HOSPITAL

A GUIDE TO

PATIENT BLOOD MANAGEMENT

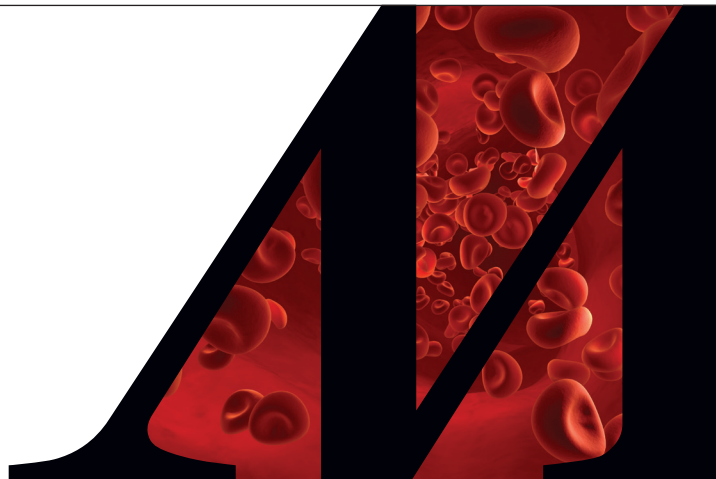
WHAT is Patient Blood Management (PBM)?

WHY is patient blood management necessary?

WHEN would my doctor recommend a blood transfusion?

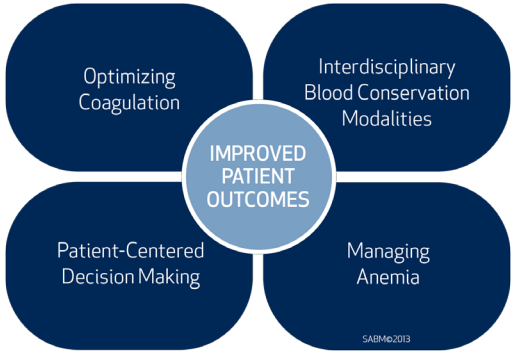
HOW can anemia be treated?

WHO is involved in PBM?



WHAT is patient blood management?

Blood management is the use of medical and surgical strategies to prevent anemia and decrease bleeding in an effort to improve patient outcomes.



WHY is patient blood management necessary?

- Conserves a precious resource
- Improves patient safety by reducing exposure to donor blood
- Provides appropriate treatment of anemia
- May lessen adverse effects on the immune system
- Preserves blood inventory
- May reduce hospital length of stay

WHEN would my doctor recommend a blood transfusion?

Blood transfusion may be necessary due to blood loss or disease. Low or high variations in red blood cells, platelets, white cells or clotting factors can indicate a disorder.

- **Anemia** is a medical condition defined as a low red blood cell count.
- **Thrombocytopenia** is a low platelet count.
- **Hemophilia** is characterized by missing clotting factors – a patient termed a "free bleeder".
- **Red blood cell destruction** may occur due to sickle cell anemia.
- **Hemorrhage** (blood loss) can be caused by trauma, accident or high blood loss surgery.
- **Blood thinners** affect the ability to stop the bleeding.

HOW can anemia be treated?

Anemia and the role of blood in your body

Red blood cells carry 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 Hgb level is called anemia. Anemia should not be left untreated, and can place greater risk to your health. An anemic patient may not be able to undergo surgery.

KNOW Your Blood Count

Normal Hgb Ranges

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

TWO Treatment Options for Anemia

1. Blood transfusions

Allogeneic – donor blood

- Red blood cells
- Platelets
- Plasma (FFP)
- Cryoprecipitate

Autologous Blood – your own blood

- Hemodilution during surgery-dilution of your own blood
- Intraoperative Blood Cell Recovery and reinfusion

Designated donation – a blood donation for a specific patient

2. "Bloodless" or transfusion-free options

Please talk to your doctor about utilizing a combination of strategies to minimize blood loss and enhance blood production.

Strategies to minimize blood loss and enhance blood production:

Make an appointment at the preoperative clinic one to two weeks prior to scheduled procedure to check:

☐ blood count ☐ iron stores

Before surgery:

Iron therapy (oral and intravenous): Iron is a mineral essential for the formation of red blood cells.

B12, folic acid, vitamin C are vitamins necessary for red blood cell production.

Synthetic erythropoietin is a hormone that stimulates red blood cell production in the bone marrow.

Dietary consult to learn about how to improve iron stores by eating appropriate iron-rich foods.

During surgery:

Intra-operative RBC recovery and reinfusion is a process of collecting your blood during surgery from the surgical site, then washing, filtering and re-infusing the processed red blood cells.

Hemostatic drug therapies are medications that assist with clotting.

Volume expanders are IV fluids made with water, salts, sugars or starches that help maintain fluid in blood vessels.

- Crystalloids – saline, lactated Ringer's Solution
- Colloids – albumin, hetastarch

Acute normovelemic hemodilution (ANH) is the removal of a specific amount of blood before surgery starts, replacing that blood volume with IV fluids, and then returning the patient's own blood at the end of surgery.

Meticulous surgical techniques are used to prevent or minimize blood loss.

Minimally invasive surgery allows surgical repair through small incisions (for example: laparoscopic, robotic surgery, transcutaneous valve replacement).

Electrocautery cauterizes tissue using electric current to reduce or stop bleeding.

Thrombin and adhesives are human-derived or synthetic products that can be used in surgery to support the body's ability to reduce bleeding.

After surgery:

Minimize blood draws by reducing the amount of lab tests and using closed system sampling devices.

Erythropietin and iron are used to stimulate the body to replace blood loss from surgery.

Postoperative blood cell recovery and reinfusion systems are use to recover, filter and return to the patient any blood loss after surgery.