

# Alternatives to Community Blood

March 2025

## The Role of Blood in Your Body

*Hemoglobin, a protein in the blood, carries oxygen. When hemoglobin levels are below normal, it is called anemia. Having anemia can cause tiredness, weakness and shortness of breath. Coagulopathy is a condition that impairs the blood's ability to clot properly, leading to excessive or prolonged bleeding.*

### Correct Anemia Before Procedures:

Correcting anemia before surgery reduces the risk of needing a transfusion. Many things may cause anemia and there are different types of the condition. Treatment varies depending on why you have anemia.

Iron deficiency is a common cause of anemia. Without the needed amount of iron, your body cannot make hemoglobin to transport oxygen in the blood.

### When planning for blood conservation, it's helpful to ask your physician(s) these questions:

- What are my available options to increase my blood count or to prepare my body for blood loss before, during and after surgery.
- What are the benefits/risks if I choose to minimize or avoid blood transfusions?
- If my blood count is low after surgery, what are some options available to prevent further blood loss and/or increase my blood count after surgery?

## Blood Conservation Program

Patients can refuse blood transfusions and participate in our Blood Conservation Program. Complete consent for blood refusal and blood refusal form. Doctors may use conservative techniques and alternatives to blood transfusions before, during or after the procedure.



## Pharmaceuticals

Pre-operative iron and stimulating agents can boost red blood cell production. For patients with coagulopathy, perioperative fibrinogen and prothrombin complex can improve coagulation.

### Red Blood Cell Production

- Iron (ferrous sulfate)
- Recombinant Erythropoietin (erythropoietin-stimulating agent, ESAs)

### Volume Expander

- Albumin

### Treat Coagulopathy

- Recombinant Factors such as Prothrombin Complex Concentrate (PCC)
- Factor VIIa
- Fibrinogen Concentrate

### Prevent Rh incompatibility during Pregnancy

- Rh Immune Globulin



## Perioperative Autologous Blood Collection and Transfusion

**Cell Salvage:** Blood is recovered during surgery from a wound or body cavity. It is washed, filtered and then, perhaps in a continuous process, returned to the patient.

**Acute Normovolemic Hemodilution (ANH):** During surgery, blood is diverted to bags and replaced with a nonblood volume expander. Thus the blood remaining in the patient during surgery is diluted, containing fewer red blood cells. During or at the end of surgery, the diverted blood is returned to the patient.

## Blood Donation

**Autologous Donation:** Patients can donate their own blood before surgery for future use. (MUST be scheduled with Vitalant)

- Must be in good health.
- Schedule prior to surgery, at least 7 days prior to procedure.
- No age limit, must weigh 110 pounds.
- Risk of becoming anemic due to donation prior to surgery.
- Unused blood will be discarded and cannot be used for the general population.

**Directed Donation:** a friend or relative makes a blood donation for a specific individual. (MUST be scheduled at Vitalant)

- Requested by physician.
- RBCs/Plasma must be collected prior to surgery, at least 7 days prior to the procedure.
- Platelets must be collected prior to surgery, at least 3 days prior to the procedure.
- Risk of transfusion-associated graft vs host disease if donor is related to patient.
- Unused blood can be used to support the general population.

*For more information on autologous or directed blood donations contact Vitalant. Call 480-675-5554 or email [donorcarespecialservice@vitalant.org](mailto:donorcarespecialservice@vitalant.org) & allow 72 hours for someone to contact you.*



### Patient Blood Management

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