Blood Transfusion

What is it?
A blood transfusion is the transfer of human blood or parts of blood into a patient’s bloodstream, usually through a vein.

Why do I need a blood transfusion?
A blood transfusion replaces blood lost during surgery or a serious accident. You may also need a blood transfusion if you have a medical condition in which your body does not produce enough of certain parts of blood. In either case, your doctor may order a transfusion of 1 or more components of blood.

Blood components that may be transfused include:
- **Red blood cells**: Cells in the blood that carry oxygen
- **Plasma**: Liquid part of the blood that carries important clotting factors and other substances
- **Platelets**: Parts of the blood that help it to clot
- **Cryoprecipitate**: Concentrated, liquid part of blood that also help it to clot

How is a blood transfusion done?
Blood is usually transfused through an intravenous line (an IV) placed in your vein. The doctor or nurse puts a small tube called a catheter into a vein, usually in your arm. The catheter connects to the pack of donor blood. A blood transfusion usually takes between 1 and 3 hours, depending on how much blood is needed.

Where does the blood come from?
Blood typically comes from:
- **A volunteer donor**. This is the most common source of blood donation.
- **A family member or friend**. Far less common, this type of blood donation is called a “directed donation” and requires a doctor’s order. In some special cases, your doctor may actually request it. The friend or family member must donate several days before the scheduled surgical procedure.

In very rare cases, a patient may be asked to donate their own blood several days before surgery. This is called a self-given or autologous blood donation. Your doctor has to order this type of blood transfusion. In some cases, your doctor may collect your own blood during surgery and use it for transfusion if needed.

How do I know the blood is safe?
Blood collection facilities screen all donors, even friends and relatives, before they can donate blood. All donor blood is also tested for diseases like hepatitis, HIV (the virus that causes AIDS), and West Nile virus.

The hospital also tests the blood before they transfuse it to be sure it’s the right blood type for you. In urgent cases where there’s no time for this testing, staff gives blood that is least likely to cause a reaction. They then test the blood as soon as possible.

See page 2 to compare benefits, risks, and alternatives.
### Potential benefits
- Replace life-threatening loss of blood from surgery or a serious accident
- Replace important parts of blood that your body does not produce enough of on its own (as with certain medical conditions)

### Risks and potential complications
- **Blood reactions**, including the following:
  - Breakdown of red blood cells in your blood or the transfused blood, which happens very rarely and is called a *hemolytic* ([HE-moe-lit-ic]) reaction
  - Allergic reactions (which could be life threatening)
  - Fever reactions and chills
  - Sudden lung injury, causing breathing problems
  - Reactions from too much fluid in your body (volume overload)
- **Infection** either from bacteria introduced through the IV or from bacteria or an undetected virus in the donor’s blood
- **Problems with the IV**, including:
  - Blockage of the IV tubing
  - Bruising, swelling, or infection at the IV site
  - Inflammation and/or clotting of the vein at the IV site
  - Leakage of blood or blood substances into the tissues surrounding the vein
  - Blood vessel problems that may limit blood flow and hurt organs and tissues including:
    - A *thrombus*, which is a blood clot
    - An *embolism*, which is an air bubble
    - A spasm in an artery

### Alternatives
- In many cases, there is no alternative to a blood transfusion.
- In other cases, your doctor may be able to give you medicines to stimulate blood cell growth or reduce bleeding.