Blood transfusions

A blood transfusion is a procedure where donated human blood or blood parts are put into your child’s bloodstream, usually through a vein. Parts of the blood include:

- Red blood cells (carry oxygen throughout the body)
- Platelets (help stop bleeding)
- Plasma (liquid that carries red blood cells and platelets through the body and helps stop bleeding)

Your child may receive some or all of these blood products through a transfusion.

Why does my child need a blood transfusion?

Your child may need a blood transfusion if they have:

- Lost blood during surgery
- Lost blood during a serious accident
- A medical condition where the body doesn’t produce enough of certain parts of blood (anemia, leukemia, hemophilia, or sickle cell disease)

How is a blood transfusion done?

During a blood transfusion:

- The healthcare provider will discuss the transfusion with you and have you sign a consent form. Your child can have a transfusion in an outpatient clinic, hospital room, or operating room.
- Your child receives blood through an IV (intravenous line) a small tube that goes into a vein, usually in their arm. (A newborn may have an IV inserted in their arm, leg, head, or umbilical cord.) If your child has a central venous catheter (port or central line), they can receive a transfusion through this.
- The provider hangs the plastic bag with blood products on an IV pole, and the blood flows from the bag into your child’s IV line. The IV may be connected to a pump, which controls the transfusion rate.

A healthcare provider checks your child’s vital signs often throughout the transfusion to make sure they aren’t having an allergic reaction to the blood product.

How long does a blood transfusion take?

A blood transfusion usually takes 1–3 hours, depending on how much blood and which blood parts your child needs. Transfusing platelets or plasma usually takes about 1 hour. Red blood cell transfusion takes about 3 hours.

How much blood does my child receive during a transfusion?

The amount of blood your child receives depends on their size and how much blood they’ve lost. Babies usually need only a small amount of blood. Generally, they receive a tablespoon of blood for each pound of weight. For example, a 6-pound baby may receive a transfusion of 6 tablespoons of blood.
Where does the blood come from?
Blood used in transfusions most often comes from a volunteer donor. However, family and friends can also donate for a specific patient if their blood types match. This is called a direct donation and requires a specific doctor’s order. Friends must donate blood at least 7 days in advance to ensure the blood can be tested before it is transfused.

Note: In many situations, your child needs a blood transfusion suddenly and immediately. Because of the timing, direct donation may not be possible. If friends and family can’t provide a direct donation, they can still contribute by donating blood at the local blood bank.

Are blood transfusions safe?
Blood collection facilities follow strict rules to make sure donated blood is safe before your child receives it. They:

- Screen all donors before they donate blood. If a person is considered high-risk for infection or other problems, they can’t donate blood.
- Test all donated blood for hepatitis, syphilis, human T-lymphotropic virus, West Nile virus, HIV, and bacteria
- Destroy all blood that is unsafe

Donated blood must also be compatible with your child’s blood before it is transfused. Blood is divided into 4 types (A, B, AB, and O) and also has positive and negative Rh types. Your child must only receive blood products compatible with their blood type.

What are the risks of blood transfusion?
While most problems with transfusions are rare, your child may have:

- Too much fluid in the blood vessels (usually prevented by giving the transfusion slowly)
- An infection from a germ in the IV or germ that wasn’t detected in the donor blood
- A hemolytic reaction (rare problem where blood breaks down too fast and cells are released directly into the bloodstream)
- An allergic reaction to donated blood, including fever, rash, and a drop in blood pressure

When should I call my child’s healthcare provider?
Call your child’s healthcare provider if you notice any of the following signs after transfusion:

<table>
<thead>
<tr>
<th>Within few hours of transfusion</th>
<th>Within 2 weeks of transfusion</th>
<th>Up to 6 months after transfusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hives</td>
<td>Increased fatigue</td>
<td>Jaundice</td>
</tr>
<tr>
<td>Itching</td>
<td>Red or brown urine</td>
<td>Nausea or vomiting</td>
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<tr>
<td>Chills</td>
<td>Shortness of breath</td>
<td>Dark urine</td>
</tr>
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<td>Fever</td>
<td>Jaundice (yellowed skin or eyes)</td>
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<tr>
<td>Skin rash</td>
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