Reduction Transfusion in a Newborn

What is it?

A reduction transfusion is a procedure to thin your baby’s blood. (A reduction transfusion is also called a partial exchange.) It’s used when aggressive IV hydration hasn’t worked or isn’t likely to work — or when your baby’s condition makes it unwise to wait for IV hydration to work.

Why does my baby need it?

A reduction transfusion is often used to treat polycythemia (hyperviscosity). Polycythemia is a condition in which there are too many red blood cells in the blood. This thickens the blood, and slows — or sometimes blocks — blood flow inside the small blood vessels. As a result, organs such as the kidneys, lungs, and brain may be damaged. Removing some of the blood and replacing it with saline solution helps thin the blood so that it can flow more freely.

How is it done?

Blood is removed through a catheter (small tube). To place the catheter, a doctor or nurse inserts the catheter through the skin and into a vein or artery in the umbilicus (“belly button”). Through the catheter, the baby’s blood is slowly withdrawn, and the same amount of saline is put in. The reduction usually takes 1 to 2 hours.
**Talking with your doctor about this treatment**

The following table lists the most common potential benefits, risks, and alternatives for this treatment. Other benefits and risks may apply in your child’s unique medical situation. The conversation you have with your child’s healthcare provider is the most important part of learning about these risks and benefits. Don’t be afraid to ask questions. It’s important to have all your questions answered before you agree to a recommended treatment.

<table>
<thead>
<tr>
<th>Potential benefits</th>
<th>Risks and potential complications</th>
<th>Alternatives</th>
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| A reduction transfusion can remove excess red blood cells in your baby’s body. This may help prevent brain damage and other problems. | • **Too much blood could be removed.** This can lead to anemia.  
• **Too little blood could be removed.** The procedure may then have to be repeated.  
• **Infection** from bacteria introduced through the catheter.  
• **Blood vessel problems**, such as a blood clot, air embolism (bubble), or spasm in an artery — all of which may limit blood flow and hurt organs and tissues.  
• **Bleeding** outside of a blood vessel.  
• **Temperature problems** — becoming too hot or cold.  
• **Necrotizing enterocolitis** (NEC), a bowel disease. | If the baby’s blood is only mildly thickened, aggressive IV hydration may be an alternative.  
In many cases, there is no alternative to a reduction transfusion. |