

Types of Transfusion Reactions and Recommended Follow-Up			
Assessment:	Description:	Usual Cause:	Recommendation:
Allergic Transfusion Reaction Mild - Moderate	Any of: Hives, itching, wheezing, throat tightening, hypotension.	Antibodies to plasma proteins (fairly common).	Recommend pretreatment with an antihistamine such as diphenhydramine. Consider combined H1 and H2 blocker pretreatment or steroids for recurrent allergic reactions. Administer blood slowly, with nursing supervision.
Allergic Transfusion Reaction Severe	Anaphylaxis, anaphylactoid shock or laryngeal edema requiring intubation and/or epinephrine administration.	Antibodies to plasma proteins (fairly common). Antibodies to IgA in IgA deficient individuals (rare).	Recommend administering washed RBC's, and pretreating with antihistamines and steroids prior to transfusions. Administer blood products slowly under close nursing supervision. Consider testing the patient's (pretransfusion) IgA level.
Hypotensive Transfusion Reaction	Hypotension, tachycardia, facial flushing, and abdominal pain.	Bradykinin generation, may be exacerbated by ACE inhibitors.	Recommend using pre-storage leukoreduced products, and giving future transfusions slowly with close nursing supervision. Stop the transfusion immediately during a hypotensive episode, place patient in the Trendelenburg position, and administer fluids.
Febrile Non-hemolytic Transfusion Reaction	Within 2 hours of transfusion: Fever (temperature increase of 1 °C or 1.8 °F), AND/OR chills, shakes, rigors.	Antibodies to leukocytes, platelets or plasma proteins stimulate endogenous pyrogen release; passive cytokine infusion.	Recommend administering leukoreduced blood components and pretreating with an antipyretic such as acetaminophen.
Septic Transfusion Reaction	Rigors, chills, fever (usually a rise ≥ 2 °C or 3.6 °F), shock, potential death. May develop quickly or several hours after transfusion. Culture transfusion bag AND patient; compare results to confirm.	Contaminated blood product, usually donor venipuncture site contamination or occult bacteremia.	Provide supportive care and appropriate antibiotic coverage. Follow patient's blood cultures.
Transfusion Related Acute Lung Injury (TRALI)	Within 6 hours of transfusion: Dyspnea, fever, hypoxia, pulmonary edema, hypotension, normal pulmonary capillary wedge pressure. "White-out" on post-transfusion chest x-ray. May require intubation.	Recipient-specific donor HLA or anti-neutrophil antibodies in the plasma component of a transfusion. Other theory - neutrophil priming lipid mediator. Less commonly, recipient antibody to donor WBCs.	Provide respiratory and blood pressure supportive care. No increased risk during future transfusions if needed. Recommend leukoreduced blood components, acetaminophen and an antihistamine.
Hypervolemia "TACO" (Transfusion Associated Circulatory Overload).	Dyspnea, headache, hypertension (>50 mmHg rise), pulmonary edema, congestive heart failure, cardiac arrhythmias. Severe cases: Flash pulmonary edema. Responds to diuresis.	Too rapid and/or excessive fluid and/or blood administration. Check volumes of blood and fluid given prior to "reaction"	Induce diuresis. Provide cardiorespiratory support as clinically indicated. If future transfusion is necessary, proceed slowly, or in divided doses (call blood bank to have units divided).
Hemolytic Transfusion Reaction Acute (Intravascular)	Hemoglobinemia (red serum), hemoglobinuria (red urine - not due to RBCs), fever, chills, anxiety, shock, DIC, dyspnea, chest pain, flank pain, acute renal failure, cardiac arrest.	ABO incompatibility (clerical error) or unknown/missed red blood cell alloantibody or other complement fixing red cell antibody.	Do not transfuse additional blood products, until blood bank work up is completed. Provide supportive care, including fluid administration and diuresis, blood pressure and respiratory support. Monitor the patient for DIC and shock.

Stop the Transfusion!
Contact your Blood Bank: