

Expected Incidence of the Various Complications of Blood Transfusions in the US

Adverse effects due to an immune reaction:

Incidence in USA

<u>Adverse effects due to an immune reaction:</u>	<u>Incidence in USA</u>
➤ Acute (sudden):	(one person per # persons transfused)
• hemolytic reactions	
➤ ABO incompatibility	1:33,000
➤ Death due to ABO incompatibility	1:633,000
• Febrile transfusion reactions caused by white cells or cytokines	1:200
• alloimmunization to white blood cells or platelets	1:100
• allergic transfusion reactions	1:333
• transfusion-related acute lung injury (TRALI)	1:5000
• acute anaphylaxis	1:20,000-50,000
➤ Delayed:	
• Hemolytic reaction	
➤ acute hemolysis	1:4000
➤ new antibody formation	1:1500
➤ Post-transfusion purpura	Rare
• Transfusion-associated graft versus host disease	Unknown

Adverse effects not due to an immune reaction

➤ Acute:	
• Circulatory overload	1:1-200
• Unit hemolysis from pressure, heat, cold, or solute imbalances	infrequent
• Electrolyte imbalances (K ⁺ , Mg ⁺⁺), citrate	Uncommon
➤ Chronic:	
• Iron overload from transfusions	Uncommon

Infectious Complications

➤ Bacteria	1:1,000,000
➤ Viruses	
• CMV	3-12 per 100
• Hepatitis A virus	Rare
• Hepatitis B virus	1:60,000
• Hepatitis C virus	1:450,000
• AIDS virus	1:660,000-1,000,000
➤ Parasites	very rare in the United States