|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Component | Patient ABO Type | Acceptable ABO Substitutions | Patient Rh Type | Acceptable Rh Substitutions | Rationale |
| Whole Blood, ie patient to donor direct transfusion. Transfusing red cells and plasma | O | None | Rh Pos | Rh Pos | Must be identical to patient. Donor plasma must be compatible to patient’s red cells. Donor red cells must be compatible with the antibodies in the patient’s plasma. |
| A |
| B | Rh Neg | Rh Neg |
| AB |
| Packed Red Blood Cells (typical in-hospital transfusion) | O | None | Rh Pos | Rh Neg | Donor red cells must be compatible with the antibodies in the patient’s plasma. |
| A | O |
| B | O | Rh Neg | None |
| AB | A, B, O |

Every person has naturally occurring antibodies in their blood against other blood types. Blood type O has Anti-A and Anti-B. Blood type A has Anti-B and blood type B has Anti-A. These antibodies are found in a person’s plasma. When performing a whole blood (cells and plasma) transfusion, one must have compatibility between the donor cells and plasma with the patient’s cells and plasma. When giving packed red blood cells (the treatment of choice in a hospital setting), no donor plasma is transfused. Hence, giving one more substitution options, because the transfusionist only has to worry about compatibility between the donor cells and the patient’s plasma.