

### Acute Transfusion Reaction Chart

**! IMMEDIATE ACTIONS**

- ✓ **STOP** transfusion
- ✓ **RUN** 0.9% saline to maintain site patency using different IV tubing
- ✓ **CHECK** vital signs or start continuous monitoring if severe reaction
- ✓ **RE-CHECK** patient ID band, TSIN band, blood label, and transfusion tag

- ✓ **NOTIFY MRHP**
- ✓ **NOTIFY** Transfusion Medicine
- ✓ **ORDER** Transfusion Reaction Investigation

**Information:**

- For acute transfusion reaction assistance, call Transfusion Medicine / Laboratory and request the TM Physician on call
- For questions or comments on this document: [Transfusion.SafetyTeam@aplabs.ca](mailto:Transfusion.SafetyTeam@aplabs.ca)

Signs & Symptoms	Timing	Next Steps	Investigation & Procedures	Possible Etiology	Future Transfusions	
<b>FEVER</b> Adults and Peds: Higher than 38°C Neonates: higher than 37.6°C <b>and</b> increase of at least 1°C from baseline	<b>38°C up to 39°C</b> and no other symptoms	Usually near end of transfusion Order Transfusion Reaction Investigation Send to TM: printed CC flowsheet (see CC1942 *) or <i>Transfusion Reaction Report</i>	<ul style="list-style-type: none"> <li>• Consider Acetaminophen.</li> <li>• <b>May restart transfusion cautiously</b>, if less than 4 hours from issue time.</li> </ul>	FNHTR (febrile non-hemolytic transfusion reaction)	Premed with antipyretic after two episodes.	
	<b>Up to 39°C</b> and chills, rigors, hypotension, shock nausea, vomiting, headache	Usually within first 15 minutes Order Transfusion Reaction Investigation		<b>DO NOT RESTART TRANSFUSION</b> <ul style="list-style-type: none"> <li>• Monitor patient closely.</li> <li>• Consider Acetaminophen.</li> <li>• Consider Meperidine (25-50 mg IV) for shaking/chills (contact pharmacy).</li> <li>• If bacterial contamination suspected, order blood cultures then start antibiotics. Order urinalysis</li> <li>• If symptoms include hemoglobinuria, flank pain, anxiety or plasma hemolysis is reported:               <ul style="list-style-type: none"> <li>○ Draw CBC, electrolytes, creatinine, bilirubin, INR, PTT, fibrinogen &amp; LDH</li> <li>○ Monitor for hypotension, renal failure (measure urine output/hour), and DIC</li> </ul> </li> <li>• IV Normal Saline (Adults: 500 mL/hr) and furosemide (40mg IV). Consult nephrologist on call.</li> </ul>	BACT (bacterial contamination)	
	<b>39°C or higher</b> and chills, nausea, vomiting, pain, dyspnea, tachycardia, hypotension, bleeding, hemoglobinuria	Within 24 hours of transfusion Send to TM: printed CC flowsheet (see CC1942 *) or <i>Transfusion Reaction Report</i> 1. EDTA (lavender top) blood sample 2. Offending product			AHTR (acute hemolytic transfusion reaction)	
<b>URTICARIA</b> hives or rash	<b>Less than 2/3 of body</b> and no other symptoms	Usually within 2-3 hours from start Order Transfusion Reaction Investigation Send to TM: printed CC flowsheet (see CC1942 *) or <i>Transfusion Reaction Report</i>	<ul style="list-style-type: none"> <li>• Consider diphenhydramine IV or PO (Adults: 50 mg, Peds: 1mg/kg).</li> <li>• <b>May restart transfusion cautiously</b>, if less than 4 hours from issue time.</li> </ul>	Minor allergic	Premed with antihistamine after two episodes.	
	<b>More than 2/3 of body</b> and may have dyspnea, airway obstruction, SOB, decreased O2 sats, decreased BP	Usually early during transfusion Order Transfusion Reaction Investigation		<b>DO NOT RESTART TRANSFUSION</b> <ul style="list-style-type: none"> <li>• If respiratory difficulty, activate Code Blue/respiratory.</li> <li>• If mild to moderate reaction with stable vitals:               <ul style="list-style-type: none"> <li>○ Consider corticosteroids (hydrocortisone Adults: 500 mg, Peds: 10mg/kg, to a max of 500mg) .</li> <li>○ Consider antihistamine (dose varies by medication) per MRHP order.</li> </ul> </li> <li>• If severe anaphylactoid reaction and/or unstable vitals (refer to AHS Anaphylaxis Policy).               <ul style="list-style-type: none"> <li>○ Epinephrine 1mg/mL IM (Adults or Peds 30kg or more: 0.3mL, Peds less than 30kg or 8 years: 0.15mL)</li> <li>○ Bolus of Normal Saline (Adult: 500–1000 mL, Peds: 20 mL/kg) per MRHP order</li> </ul> </li> <li>• Continuous monitoring (pulse, BP, resps, O2 sats)</li> <li>• Chest X-ray &amp; urinalysis</li> </ul>	Severe allergic/ Anaphylactic/ Anaphylactoid	May require special blood components. Consult Transfusion Medicine Physician on call.
	<b>With severe symptoms</b> Profound hypotension, loss of consciousness, circulatory collapse, death	Usually early during transfusion Send to TM: 1. Printed CC flowsheet (see CC1942 *) or <i>Transfusion Reaction Report</i> 2. EDTA (lavender top) blood sample 3. Offending product			Anaphylactic Shock	
<b>DYSPNEA</b> SOB, decreased O2 sats	Congestive Heart Failure and may have hypertension, orthopnea, cyanosis, tachycardia, jugular venous distension, pulmonary edema, pedal edema, headache	During or within 6 hours of transfusion Order Transfusion Reaction Investigation Send to TM: 1. Printed CC flowsheet (see CC1942 *) or <i>Transfusion Reaction Report</i> 2. EDTA (lavender top) blood sample 3. Offending product	<b>DO NOT RESTART TRANSFUSION</b> <ul style="list-style-type: none"> <li>• If respiratory difficulty, activate Code Blue/respiratory.</li> <li>• Continuous monitoring (pulse, BP, resps O2 sats).</li> <li>• Give diuretics (Furosemide), O2, place in high Fowler's if condition allows.</li> </ul>	TACO (transfusion associated circulatory overload)	Decrease infusion rate (1 ml/kg/hr- max 4 hr/bag). Consider preload with diuretic or between transfusions.	
	Cyanosis, respiratory distress	Within 24 hours of transfusion		Transfusion Associated Dyspnea		
	and/or Hypotension, tachycardia, fever, cyanosis	Within 6 hours of transfusion; usually within first 15 minutes Order Transfusion Reaction Investigation, obtain chest x-ray results Send to TM: 1. Printed CC flowsheet (see CC1942 *) or <i>Transfusion Reaction Report</i> 2. EDTA (lavender top) blood sample 3. Offending product		<b>DO NOT RESTART TRANSFUSION</b> <ul style="list-style-type: none"> <li>• If respiratory difficulty, activate Code Blue/respiratory.</li> <li>• Continuous monitoring (pulse, BP, resps, O2 sats).</li> <li>• O2, possible intubation, ventilation or vasopressors.</li> <li>• If bacterial contamination suspected, order blood cultures then start antibiotics immediately.</li> <li>• If symptoms include hemoglobinuria, flank pain, anxiety or plasma hemolysis is reported:               <ul style="list-style-type: none"> <li>○ Draw CBC, electrolytes, creatinine, bilirubin, INR, PTT, fibrinogen &amp; LDH.</li> <li>○ Monitor for hypotension, renal failure (measure urine output/hour) and DIC.</li> <li>○ IV Normal Saline (Adults: 500 mL/hr) and furosemide (40 mg IV). Consult nephrologist on call.</li> </ul> </li> <li>• Assess chest X-ray for bilateral pulmonary infiltrates</li> </ul>	TRALI (transfusion related acute lung injury)  Differentiate from BACT or AHTR	