

## Intravenous Immune Globulin (IVIg) Reaction Chart

All patients should receive information on potential transfusion reactions and how to report a suspected transfusion reaction.

### Mild Transient Reactions/Side Effects

- Common mild signs and symptoms that resolve if the flow rate is reduced and/or the patient is medicated.
- Most likely to occur in first 30 to 60 minutes of infusion.
- **Do Not Report** to Transfusion Medicine Services/Laboratory (TMS/Lab). No patient samples required.
- If patient's condition does not improve despite decreasing the rate or medication: **Stop the infusion** and refer to the section on **Acute IVIg Reactions** on this chart.

Signs and Symptoms	Actions	Comments
<ul style="list-style-type: none"> <li>▪ Headache (mild to moderate)</li> <li>▪ Flushing</li> <li>▪ Muscle aches</li> <li>▪ Shivering</li> <li>▪ Nausea</li> <li>▪ Localized Urticaria</li> <li>▪ Pruritus</li> <li>▪ Anxiety</li> <li>▪ Light-headed</li> <li>▪ Dizziness or irritability</li> </ul>	<ul style="list-style-type: none"> <li>▪ Decrease the flow rate until a rate at which the symptoms subside is reached</li> <li>▪ Consult physician</li> <li>▪ Medicate appropriately</li> <li>▪ Apply relevant patient comfort measures</li> <li>▪ Frequent vital signs</li> <li>▪ Document as per facility policy</li> <li>▪ Do not report to TMS/Lab</li> </ul>	For subsequent treatments consider: <ul style="list-style-type: none"> <li>▪ premedication</li> <li>▪ advancing infusion at a slower rate</li> </ul>
<ul style="list-style-type: none"> <li>▪ Pain at intravenous site</li> </ul>	Use of a large vein for the infusion may avoid pain at the intravenous site.	

### Acute IVIg Reactions - Within 24 hours of Transfusion

- **Stop the infusion; Consult Physician; Report to Transfusion Medical Services / Laboratory (TMS/Lab)**
- Document as per facility policy.
- Return any unopened product to TMS/Lab.

\*Note: **Fever** is defined as an oral temperature  $\geq 38^{\circ}\text{C}$  **AND**  $\geq 1^{\circ}\text{C}$  rise in oral temperature above pre-transfusion baseline

Signs and Symptoms	Reaction	Actions	Comments
Anxiety; fever*; chills; rigors; non localized urticaria/rash; itchiness; flushing; nausea; vomiting; chest, back or abdominal pain; tachycardia; hypotension or hypertension <b>OR</b> any mild reactions/side effects listed above that do not respond to rate decrease or medication.	Moderate to Severe	<ul style="list-style-type: none"> <li>▪ Contact the physician for assessment and symptomatic treatment.</li> <li>▪ Comfort measures as applicable.</li> <li>▪ <b>Do not restart without a physician's order.</b></li> <li>▪ Reassess patient frequently.</li> </ul>	For subsequent treatments consider: <ul style="list-style-type: none"> <li>▪ premedication</li> <li>▪ increasing infusion at a slower rate</li> <li>▪ changing brand of IVIG</li> <li>▪ the use of SCIG</li> </ul>
Facial and/or tongue swelling; difficulty in swallowing; chest tightness; airway edema; dyspnea; hypotension; shock; tachycardia; nausea; vomiting; widespread urticaria/rash (>2/3 body), anxiety; fever*.	Anaphylaxis	<ul style="list-style-type: none"> <li>▪ <b>Do not restart.</b></li> <li>▪ Contact physician for assessment and symptomatic treatment.</li> <li>▪ May require epinephrine.</li> <li>▪ Comfort measures as applicable</li> </ul>	<ul style="list-style-type: none"> <li>▪ May be reaction to IgA in an IgA deficient patient.</li> </ul> For subsequent treatments consider: <ul style="list-style-type: none"> <li>▪ changing brand of IVIG</li> <li>▪ reassessing the need for IVIG.</li> <li>▪ consulting an immunologist.</li> <li>▪ measuring IgA levels</li> </ul>
Fever*, back pain, dyspnea, red / brown urine.	Acute Hemolysis	<ul style="list-style-type: none"> <li>▪ <b>Do not restart.</b></li> <li>▪ Contact physician for assessment and symptomatic treatment.</li> <li>▪ Send to TMS/Lab:               <ul style="list-style-type: none"> <li>▪ 2 EDTA vials.</li> <li>▪ First voided post-reaction urine sample for routine urinalysis.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Due to antibodies in IVIG directed against a patient's red blood cells.</li> <li>▪ Blood group A, B or AB adult patients receiving more than 50g of IVIG or pediatric patients receiving 1g/kg or more are at an increased risk of hemolysis.</li> </ul>

## Intravenous Immune Globulin (IVIG) Reaction Chart

All patients should receive information on potential transfusion reactions and how to report a suspected transfusion reaction.

### Delayed IVIG Reactions - Greater than 24 hours post Transfusion

- **Consult Physician; Report to TMS/Lab; Send Required Patient Samples.**
- Symptomatic treatment as ordered by physician. Comfort measures as applicable.
- Document as per facility policy
- Patient may be readmitted to hospital at a later date due to delayed reaction.
- For subsequent administrations consider:
  - premedicating appropriately
  - advancing the infusion at a slower rate
  - reducing maximum infusion rate
  - changing brand of IVIG
  - the use of SCIG

\*Note: **Fever** is defined as an oral temperature  $\geq 38^{\circ}\text{C}$  **AND**  $\geq 1^{\circ}\text{C}$  rise in oral temperature above pre-transfusion baseline

Signs and Symptoms	Reaction Type	Comments
Prolonged and severe headache that is unresolved by medication	Delayed Headache	<ul style="list-style-type: none"> <li>▪ Medicate as ordered as soon as first signs of headache occur.</li> <li>▪ For subsequent IVIG administration, physician may consider prehydration with saline.</li> </ul>
Severe and incapacitating headache with nuchal rigidity, drowsiness, fever*, lethargy, photophobia, painful eye movements, nausea, vomiting, diarrhea, pharyngitis, deterioration of mental status	Aseptic Meningitis	<ul style="list-style-type: none"> <li>▪ Presents up to 72 hours post transfusion.</li> <li>▪ Usually resolves spontaneously in 1-2 days.</li> <li>▪ Previous history of migraine headaches may be a risk factor.</li> <li>▪ Pre/post medication with corticosteroids/anti-migraine medication may help to prevent/reduce incidence.</li> </ul>
Fever*, back pain, dyspnea, red / brown urine, falling haemoglobin, jaundice, unexpected/unexplained fatigue	Delayed Hemolysis	<ul style="list-style-type: none"> <li>▪ Occurring within 10 days post transfusion.</li> <li>▪ Often due to antibodies in IVIG directed against a patient's red blood cells.</li> <li>▪ Blood group A, B or AB adult patients receiving more than 50g of IVIG or pediatric patients receiving 1g/kg or more are at an increased risk of hemolysis.</li> </ul>
Peripheral edema, periorbital edema, urination changes, increased serum creatinine, hypertension, back pain, flank pain, blood in urine.	Acute Renal Failure	<ul style="list-style-type: none"> <li>▪ Predisposing factors: age&gt;65; diabetes mellitus; pre-existing renal insufficiency.</li> <li>▪ Usually seen with products containing sucrose (none currently licensed in Canada).</li> </ul>
Symptoms related to: myocardial infarction; transient ischemic attack; stroke; deep vein thrombosis.	Thrombo-embolic events	<ul style="list-style-type: none"> <li>▪ Causative relationship not clearly understood.</li> <li>▪ Possibly related to increases in blood viscosity.</li> <li>▪ Risk factors include: atherosclerosis; advanced age; previous thrombotic event; clotting disorder; hypertension; diabetes; obesity; immobility.</li> </ul>
Variable as per specific infectious disease.	Transfusion Transmitted Infections	<ul style="list-style-type: none"> <li>▪ Diagnosed through transmissible disease tests.</li> <li>▪ No reported cases of HIV or HBV.</li> <li>▪ No reported HCV since 1995.</li> <li>▪ Effective viral reduction measures.</li> <li>▪ Prion (vCJD) transmission theoretical risk.</li> </ul>