

# Intravenous Immune Globulin (IVIG) Reaction Chart

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

## Mild Transient Reaction/Side Effects

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

Signs and Symptoms	Action	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 the symptoms subside</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 TM/Lab</li> </ul>	For subsequent treatments consider: <ul style="list-style-type: none"> <li>▪ premedication</li> <li>▪ increasing the infusion at a slower rate</li> </ul>
<ul style="list-style-type: none"> <li>▪ Pain at intravenous site</li> </ul>	Using 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 Medicine/Laboratory (TM/Lab)**
- Document as per facility policy
- Return any unopened product to TM/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 urticarial/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 the 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 urticarial/rash (involving the face/neck <b>OR</b> greater than 2/3 of the body surface), 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 level</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 TM/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 patients receiving a dose of 1 g/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 reactions and how to report a suspected transfusion reaction.

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

- **Consult Physician; Report to TM/Lab; Send Required Patient Samples.**
- Symptomatic treatment as ordered by physician. Comfort measures as applicable
- Document as per policy.
- Patient may be readmitted to hospital at a later date due to delayed reaction.
- For subsequent administration consider:
  - premedicating appropriately
  - increasing 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 hemoglobin, 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 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 sufficiency</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>