

Acute Management of Infusion Reactions^{2,10,35,95-101}

Prior to the infusion:²

- Assess history for risk factors
- Ensure appropriate pre-medications taken/given at the specified time periods
 - Patients with history of non-compliance to oral pre-medications should receive intravenous pre-medications³⁵
- Updated IR protocol (including standing orders) and medical equipment/supplies needed for resuscitation must be available
- Educate patient and caregiver about signs and symptoms of IRs

Prompt recognition of reaction and assessment of reaction severity

Grade 1 or 2 Reactions:^{2,35,95}

- Stop or slow infusion
- Have someone call for medical assistance
- Maintain IV line with normal saline or other appropriate solution
- Assess vitals and level of consciousness regularly
- Position patient appropriately
- Administer oxygen, if required
- Administer prn medications

Grade 3 or 4 Reactions:^{2,35,95}

- Stop infusion and assess for anaphylaxis – follow local institutional anaphylaxis guidelines
- Have someone call for medical assistance
- Maintain IV line with normal saline or other appropriate solution
- Assess vitals and level of consciousness regularly
- Position patient appropriately
- Administer oxygen, if required
- Administer prn medications

| SYMPTOM | TREATMENT |
|----------------------------|---|
| Flushing, rash, urticaria | <ul style="list-style-type: none"> • 1st generation H1-receptor antagonist (e.g. diphenhydramine 25-50 mg IV) x 1^{2,95,96,98-101} • Ranitidine 50 mg IV^{95,96,101} or Famotidine 20 mg IV x 1⁹⁸ • Hydrocortisone 100 mg IV x 1⁹⁸⁻¹⁰⁰ |
| Fever | • Antipyretic (e.g. acetaminophen 650 mg PO x 1 ⁹⁸⁻¹⁰⁰) |
| Rigors/chills [†] | • Meperidine 25-50 mg IV x 1 ^{97,98} |
| Nausea and/or vomiting | • Dimenhydrinate 25-50 mg IV x 1 ^{99,100} |
| Hypotension | • Normal saline as per hospital policy |
| Wheezing/SOB | • Salbutamol 2.5-5 mg nebulized inh q 20 min x 3 doses, then q1-4h PRN ⁹⁶ |

Symptom resolution

Grade 1 or 2 Reactions:²

- Consider restart and re-challenge at a reduced rate with pre-medications

Grade 3 or 4 Reactions:²

- Restart is discouraged[‡]
- If severe reaction occurred (e.g. anaphylaxis), re-challenge is strongly discouraged
- May consider re-challenge if no vital symptoms are affected (i.e. absence of respiratory distress, hypotension, etc)[‡]
- If no other suitable treatment options exist, desensitization may be considered to safely re-challenge

| GRADE 1-2 | GRADE 3-4 |
|--|---|
| Any one of the following symptoms: | Any one of the following symptoms: |
| Transient flushing or rash (covering <30% BSA) | Severe rash (covering >30% BSA) |
| Dizziness (not interfering with activity) | Lightheadedness/dizziness (interferes with activity) |
| Puritus | Agitation |
| Fever 38°C-40°C | Fever >40°C |
| Mild dyspnea (SOB with moderate to minimal exertion) | Bronchospasm with or without urticaria |
| Mild to moderate rigors/chills | Respiratory distress |
| Mild chest discomfort | Hypoxia |
| Mild abdominal discomfort | Chest tightness |
| Mild hypotension (less than 20mmHg drop from baseline) | Uncontrolled hypotension (more than 20 mmHg drop from baseline) |
| | Cyanosis |
| | Altered LOC |
| | Angioedema, periorbital/facial |
| | Severe nausea, vomiting, and/or diarrhea |

Adapted from [CTCAE \(v. 5.0\)](#)¹⁰

*This is a general management approach, and may not be applicable to all medications, such as rituximab.

[†]Use with caution in elderly patients and patients with decreased renal function due to risk of confusion and hypotension.

[‡]May not be applicable to all anticancer medications. Please see Appendix 1 for further information.