

CONTRAST REACTION TREATMENT (SUMMARY)

CATEGORIES OF REACTION SEVERITY

- **MILD** - Signs and symptoms are self-limited without evidence of progression.

Allergic-Like	Physiologic
limited urticaria / pruritus	limited nausea / vomiting
limited cutaneous edema	transient flushing / warmth / chills
limited "itchy" or "scratchy" throat	headache / dizziness / anxiety / altered taste
nasal congestion	mild hypertension
sneezing / conjunctivitis / rhinorrhea	vasovagal reaction that resolves spontaneously

- **MODERATE** - Signs and symptoms are more pronounced and commonly require medical management. Some of these reactions have the potential to become severe if not treated.

Allergic-Like	Physiologic
diffuse urticaria / pruritus	protracted nausea / vomiting
diffuse erythema w/ stable vital signs	hypertensive urgency
facial edema without dyspnea	isolated chest pain
throat tightness or hoarseness without dyspnea	vasovagal reaction that requires & responds to treatment
wheezing / bronchospasm with no or mild hypoxia	

- **SEVERE** - Signs and symptoms are often life-threatening and can result in permanent morbidity or death if not managed appropriately.

Allergic-Like	Physiologic
diffuse edema or facial edema w/ dyspnea	vasovagal reaction resistant to treatment
diffuse erythema with hypotension	arrhythmia
laryngeal edema with stridor and/or hypoxia	convulsions / seizures
wheezing / bronchospasm with significant hypoxia	hypertensive emergency
anaphylactic shock (hypotension/tachycardia)	

- **Cardiopulmonary arrest** is a nonspecific end-stage result that can be caused by a variety of severe allergic-like and physiologic reactions. If it is unclear what etiology caused the cardiopulmonary arrest, it may be judicious to assume that the reaction was an allergic-like one.
- **Pulmonary edema** is a rare severe reaction that can occur in patients with tenuous cardiac reserve (cardiogenic pulmonary edema) or in patients with normal cardiac function (noncardiogenic pulmonary edema). Noncardiogenic pulmonary edema can be allergic-like or physiologic. If the etiology is unclear, it may be judicious to assume that the reaction was an allergic-like one.

SIMPLIFIED CONTRAST REACTION TREATMENT ALGORITHM FOR ADULTS

- Hives - diphenhydramine 50 mg/mL – 25-50 mg IM or IV push over 1-2 mins
- Bronchospasm – albuterol 90 mcg HFA – 2 inhalations (can repeat up to 3 times)
- Laryngeal edema – epinephrine 1 mg/mL vial – 0.3 mL (0.3 mg) IM (can repeat every 5-15 mins up to total of 3 doses)
- Rebound prevention – dexamethasone 20 mg / 5 mL – 2 mL (8 mg) IV push over 1-2 mins
- See additional section in the contrast policy for detailed reaction treatment algorithms.
- Any allergic-like or adverse reactions to IV or oral contrast should be documented in the technologist worksheet and in the radiologist's report.
- The technologist should also complete an ERS incident report.

ALLERGIC REACTION TREATMENT KITS

- Kit Contents (St Vincents locations):
 - Albuterol HFA 90 mcg/actuation inhaler
 - Diphenhydramine IV 50 mg/mL vial
 - Epinephrine 1 mg/mL vial for IM use only
 - Dexamethasone 20 mg / 5 mL 5mL vial
- Kit will be locked with pharmacy-issued plastic locks and labeled with an expiration sticker.
- Charge sheets included in each kit will be completed by Imaging Services Personnel following use and returned with the used kit to Pharmacy in exchange for a new kit.
- Needles and syringes will be stocked by the imaging department and in a readily available location.