

# CONTRAST REACTION TREATMENT PROTOCOL

## CATEGORIES OF REACTION SEVERITY

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

Allergic-Like	Physiologic
limited urticaria / pruritus limited cutaneous edema limited "itchy" or "scratchy" throat nasal congestion sneezing / conjunctivitis / rhinorrhea	limited nausea / vomiting transient flushing / warmth / chills headache / dizziness / anxiety / altered taste mild hypertension 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 diffuse erythema w/ stable vital signs facial edema without dyspnea throat tightness or hoarseness without dyspnea wheezing / bronchospasm with no or mild hypoxia	protracted nausea / vomiting hypertensive urgency isolated chest pain vasovagal reaction that requires & responds to treatment

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

- **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 is/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 is/was an allergic-like one.

### **SIMPLIFIED CONTRAST REACTION TREATMENT ALGORITHM FOR ADULTS**

- Hives - diphenhydramine 50 mg/mL – 1 mL (50 mg) IM or IV slow push
- Bronchospasm – albuterol 90 mcg HFA – 2 inhalations (can repeat as needed)
- Laryngeal edema – epinephrine 1 mg/mL vial – 0.5 mL (0.5 mg) IM (can repeat once after 5 mins)
- Rebound prevention – dexamethasone 20 mg / 5 mL – 2 mL (8 mg) IV slow push
- 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.