

Naval Medical Center Portsmouth
Allergy/Immunology Referral Guidelines: Adverse Drug Reactions (ADR)

Definition(s)

- **Adverse drug reactions** include all unintended pharmacologic effects of a drug except therapeutic failures, intentional overdosage, abuse of the drug, or errors in administration.
- **ADR** may be immunologically mediated and classified by the Gell-Coombs classification of human hypersensitivity.
 - **ALLERGIC REACTIONS - IgE-mediated (type I)**
 - **Cytotoxic (type II)** – antibody mediated complement activation (hemolytic anemia)
 - **Immune complex (type III)** – serum sickness reactions
 - **Cellular mediated (type IV)** - delayed hypersensitivity (TEN, SJS)
- **Pseudoallergic (anaphylactoid) reactions** mimic anaphylaxis but are caused by non-IgE-mediated release of mediators from mast cells and basophils. (ex. Radio-contrast media)
- **Drug intolerance** is an undesirable pharmacologic effect without underlying abnormalities of metabolism, excretion, or bio-availability of the drug.
- **Drug idiosyncrasy** is an abnormal and unexpected effect that is unrelated to the intended pharmacologic action of a drug and has an unknown mechanism.

Initial Diagnosis and Management

- Diagnosis of ADR is dependent on the timing of drug introduction and the nature of the adverse reaction. IgE mediated allergic reactions consistently occur within seconds to 1-2 hours of suspect drug administration.
 - **With the exception of PCN, there is no standardized diagnostic test for IgE mediated drug allergy.**
- **Non-IgE mediated reactions to medications cannot be evaluated by skin testing.** Medication avoidance is mandatory in most cases. Pseudoallergic reactions may be managed by premedication and slow infusion rates.

Indications for Specialty Evaluation and Management

- Specialist referral is only indicated in cases of suspected IgE mediated allergic reactions to medications for possible diagnostic testing.
- Standardized testing is available to penicillin; non-standardized testing is performed on a case-by-case basis. Due to the nature of testing, most will be deferred till age 5 years.
- **Desensitization for IgE mediated drug reactions is potentially life-threatening and required with every administration of the drug.** Use of alternative medications will be recommended.
- Oral desensitization may be performed on an outpatient basis in special populations at the request of a referring subspecialist (ex. ASA exacerbated asthma).

Return to Primary Care

- Indicated diagnostic testing or medication challenge is completed.
 - Follow-up recommendations will be provided depending on the type of intervention performed.

Reference: **Drug Allergy: An Updated Practice Parameter, OCT 2010.** Joint Task Force on Practice Parameters: AAAAI/ACAAI