

# Diversified Radiology of Colorado

## Suggested Pretreatment Regimen for Patients Reactive to Iodinated Contrast

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1% to 2% of patients given iodinated contrast have anaphylactoid reactions. These reactions are immediate in type and may include urticaria, angioedema, rhinitis, bronchospasm and hypotension. Patients with a prior history of an anaphylactoid reaction to iodinated contrast have an increased risk of an anaphylactoid reaction on subsequent exposure to contrast. This risk ranges from 17% to 35% according to several studies. Greenberger (prospective study 1) and Bush and Swanson (literature review; 2) have determined that pretreatment with diphenhydramine (Benadryl) and a corticosteroid reduces, but does not eliminate, this risk. The pre-treatment protocol they identified is suggested for patients who have had a significant contrast reaction where subsequent exposure to contrast is deemed necessary.

1. Establish essential need for repeat exposure to iodinated contrast.
2. Obtain informed consent from patient.
3. Administer prednisone 50 mg. orally 13, 7 and 1 hour prior to procedure.
4. Administer diphenhydramine (Benadryl) 50 mg p.o. or intramuscularly 1 hour prior to procedure.
5. Have emergency equipment available during procedure.

**IN AN EMERGENCY WHEN IODINATED CONTRAST MUST BE GIVEN TO A PATIENT WHO HAS HAD A PRIOR ANAPHYLACTOID REACTION AND THE 13 HOURS REQUIRED FOR THE ABOVE REGIMEN ARE NOT AVAILABLE, GREENBERGER ET.AL. SUGGESTS THE FOLLOWING REGIMEN (ALTHOUGH NO DATA IS AVAILABLE TO DOCUMENT ITS EFFICACY):**

1. Establish essential need for repeat exposure to iodinated contrast.
2. Obtain informed consent from patient.
3. Administer hydrocortisone 200 mg (Solucortef) intravenously immediately and then every 4 hours until the procedure is complete.
4. Administer diphenhydramine (Benadryl) 50 mg. intramuscularly 1 hour prior to procedure.
5. Have emergency equipment ready.

### References/additional reading:

1. Greenberger PA, Patterson R, et. al., Pretreatment of high-risk patients requiring radiographic contrast media studies. *J Allergy Clin Immunol* 1981; 67:185-187.
2. Bush WH and Swanson DP, Review article: acute reactions to intravascular contrast media *AJR* 1991, 157:1153-1161. Reviews pre-treatment and treatment protocols and classes of adverse reactions.
3. Lasser EC, Berry CC, et. al., Pretreatment with corticosteroids to prevent adverse reactions to contrast media. *AJR* 1994; 162: 523-526 (*see also commentary in same issue pp. 527-529 by Dunnick and Cohan.*)