MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

Department of Radiology
Steroid Premedication Guideline *Update 10/11/2017*

There is **one** indication for a steroid prep prior to **intravenous iodinated contrast injection (e.g., CT, IVP):**

- Prior allergic-like reaction to iodinated contrast (any severity)
  - Examples: hives, itching, acute rash, wheezing, bronchospasm, stridor, laryngeal edema, anaphylaxis

There is **one** indication for a steroid prep prior to **intravenous gadolinium-based contrast injection (e.g., MRI):**

- Prior allergic-like reaction to gadolinium-based contrast (any severity)
  - Examples: hives, itching, acute rash, wheezing, bronchospasm, stridor, laryngeal edema, anaphylaxis

The following are not considered an indication for a steroid prep:

- Asthma
- Reactions to other substances (regardless of number or severity, including shellfish and betadine)
- Physiologic reaction to contrast material such as a vasovagal reaction, nausea, vomiting

Rationale: The benefits of preps are very small relative to their indirect harms (e.g., delayed care, prolonged hospitalization). The vast majority of patients who receive a steroid prep derive no benefit (e.g., breakthrough reactions, incomplete efficacy). Steroid preps are not given for any other "drug" in patients who have these other risk factors (e.g., asthma, other allergies).

HOW TO PREMEDICATE for Adult Patient

Standard oral premedication regimen:

- **Prednisone** – 50 mg PO, 13, 7, and 1 hour prior to the procedure*
- **Diphenhydramine** – 50 mg PO 1 hour prior to the procedure **

*Note: Doses may be distributed unevenly to allow a patient to get a reasonable night's sleep the evening prior to the CT; however, the first dose should be taken more than 11 hours before the time the exam is scheduled to be performed.

**Note: It is not critical to administer diphenhydramine as part of the premedication regimen (there are published regimens using corticosteroids only). In other words, although it is part of the UM premedication protocol, it is not considered mandatory.

Urgent IV premedication protocol (indications: ED patients, inpatients, and medically urgent outpatients):

- **Hydrocortisone** – 200 mg IV, 5 hours and 1 hour prior to the procedure
- **Diphenhydramine** – 50 mg PO (or IM or IV, if patient cannot take PO), one hour prior to the procedure

Note: If preferred, methylprednisolone 40 mg IV can be substituted for hydrocortisone 200 mg, dose for dose.

Source: MD/RHC/JHE/EK 9/5/2017

HOW TO PREMEDICATE for Pediatric Patient

Standard oral premedication regimen:

- **Prednisone** – 0.5-0.7 mg/kg PO, 13, 7, and 1 hour prior to the procedure (50 mg maximum dose)
- **Diphenhydramine** – 1.25 mg/kg PO 1 hour prior (50 mg maximum dose)

Urgent IV premedication protocol (indications: ED patients, inpatients, and medically urgent outpatients):

- **Hydrocortisone** – 2mg/kg IV (to a max of 200mg), 5 hours and 1 hour prior to procedure
- **Diphenhydramine** – 1.25mg/kg IV, IM or PO (to a max of 50mg), 1 hour prior to procedure

Source: PJS 10/11/17

Please note: if a patient requires premedication that includes diphenhydramine (Benadryl), they will need to arrange for a driver to and from the appointment, due to the possibility of drowsiness from the required medication.