

**SOUTH AFRICAN ADULT HOSPITAL LEVEL ESSENTIAL MEDICINES LIST
CHAPTER 22: MEDICINES USED FOR DIAGNOSIS
NEMLC RECOMMENDATIONS FOR MEDICINE AMENDMENTS (2017 - 2019)**

Medicine amendment recommendations, with supporting evidence and rationale are listed below. Kindly review the medicine amendments in the context of this chapter.

SECTION	MEDICINE/MANAGEMENT	ADDED/DELETED/AMENDED
22.1 Diagnostic contrast agents and related substances	loversol 300	Deleted
	loversol 350	Deleted
<i>-Iodine allergy</i>	Prednisone, oral	Added (as a premedication)
	Cetirizine, oral	Not added (as a premedication)

22.1 DIAGNOSTIC CONTRAST AGENTS AND RELATED SUBSTANCES

loversol 300: deleted

loversol 350: deleted

The text was amended as follows, as the Adult Hospital Level Expert Review Committee was of the opinion that loversol is non-ionic and water soluble, and should be grouped with the other agents:

Medication used in diagnostic radiology includes:

- Barium sulphate suspension.
- Non-ionic contrast media, e.g.:
 - o iohexol, or
 - o iopamidol, or
 - o iopromide.
- ~~loversol 300 and 350.~~

Iodine allergy

Prednisone, oral: added (as a premedication)

Cetirizine, oral: not added (as a premedication)

The STG cautions about subjecting patients to investigations needing contrast only when absolutely essential and to uncertainties about the role of premedication (prednisone) in prophylaxis.

Level of Evidence: II Systematic review of low methodological quality, Guidelines

Prednisone, oral:

*Systematic review*¹ of 9 RCTs, to determine the efficacy of pharmacological prevention of potentially life threatening reactions to iodinated contrast media, were of poor methodological quality and suggested that life threatening anaphylactic reactions associated with iodinated contrast media are rare. RCTs were heterogenous and no RCTs analysis data using ITT analysis. Pooling of estimates was not possible due to differences in the type and dose of premedication and contrast media and the

¹ Tramèr MR, von Elm E, Loubeyre P, Hauser C. Pharmacological prevention of serious anaphylactic reactions due to iodinated contrast media: systematic review. BMJ. 2006 Sep 30;333(7570):675. <https://www.ncbi.nlm.nih.gov/pubmed/16880193>

authors reported a lack of data of premedication used in patients with a history of allergic reactions to iodinated contrast media.

Results (compared to placebo or no treatment):

- o Respiratory symptom: 4/391 antihistamine cases vs 9/394 controls (OR 0.46, 0.15 to 1.39)
- o Laryngeal oedema: In two trials, 3/778 methylprednisolone, oral/prednisolone, IV vs 11/769 controls (OR 0.31, 0.11 to 0.88; 2 RCTs; NNT=96).
- o Composite outcome (shock, bronchospasm, and laryngospasm): 7/3093 methylprednisolone, oral vs 20/2178 controls (OR 0.28, 0.13 to 0.60; NNT=146).
- o Angio-oedema: 1/196 IV clemastine and cimetidine vs 8/194 controls (OR 0.20, 0.05 to 0.76; 1 RCT; NNT=28).

The authors concluded that 'Physicians who are dealing with these patients should not rely on the efficacy of premedication'. They also suggest that as only a limited number of patients with serious reactions would have a positive skin test for the iodinated contrast media, radiology departments should be adequately trained to identify and treat anaphylactic reactions.

Guidelines: However, the above does show that corticosteroids are effective and standard practice² is to pre-medicate with oral corticosteroid in patients with a history of previous allergic reactions associated with contrast media.

Cetirizine, oral:

Systematic review³: Authors of a systematic review could not source RCTs testing combination of a steroid and antihistamine as pre-medication.

Report prepared by TD Leong: Secretariat to the Adult Hospital Level Committee (2017-2020)

- **Note:** Information was sourced from NEMLC ratified minutes and NEMLC-approved documents.

² American College of Radiology. ACR Manual on Contrast Media, 2018, version 10.3. <https://www.acr.org/Clinical-Resources/Contrast-Manual>

³ Tramèr MR, von Elm E, Loubeyre P, Hauser C. Pharmacological prevention of serious anaphylactic reactions due to iodinated contrast media: systematic review. BMJ. 2006 Sep 30;333(7570):675. <https://www.ncbi.nlm.nih.gov/pubmed/16880193>