

## Vesicants and Irritants

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Irritants - An irritant drug causes an inflammatory reaction, with aching, burning, tightness, pain, and phlebitis at the needle insertion site or along the vein. Clinical signs include warmth, erythema, and tenderness in the extravasated area, but without tissue sloughing or necrosis. Symptoms are usually of short duration, and there are no long-lasting sequelae but may cause soft tissue damage when extravasated.

Vesicants - Extravasation of a vesicant drug has the potential to cause tissue necrosis with a more severe and/or lasting injury. Vesicant extravasation may result in loss of the full thickness of the skin and, if severe, underlying structures. Soft tissue injury may be related to the following characteristics of the extravasate: osmolality (concentration), inherent cytotoxicity (potential for chemical irritation, burn and necrosis), infusion pressure and vasoconstrictive effects.

Drugs not appropriate for administration via any midline catheter:

- a. Continuous vesicant therapies
- b. >10% dextrose
- c. >5% PROTEIN
- d. Total parenteral nutrition

Midlines are treated as a peripheral IV unless told otherwise. Refer to Sentara Large Volume Parenteral Solutions Job Aid to determine appropriate medications, concentrations and rates

The administration of a drug with an osmolality > 500 is contraindicated with a midline catheter. The osmolality varies depending on the drug, diluent, and amount of fluid the drug is diluted in.

### References:

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