Guidelines for Use of Phenytoin (Dilantin®)

Recommended Neonatal Dose, Route, and Interval

- **Loading Dose:** 15-20mg/kg IV infusion over at least 30 minutes
- **Maintenance:** 4-8mg/kg/day IV slow push, or PO divided every 8-12 hours. (Up to 8 mg/kg/dose q8 to 12 hours after 1 week of age).

**NOTE:**
- Rate of infusion must not exceed 0.5 mg/kg/min
- Only 30-50% of the oral suspension dose is absorbed in neonates. Therefore, as much as twice the recommended dose may be necessary to achieve and maintain therapeutic drug levels.
- Adjust dose based on levels

**Indications**
- Anticonvulsant, seizures refractory to phenobarbital alone.

**Possible Adverse Reactions**

- Nystagmus, hypotension, bradycardia, arrhythmias, lethargy, vomiting, hypersensitivity, rickets, rash, exfoliative dermatitis, lymphadenopathy.
- Infiltration into tissue can produce severe sloughing.
- Stevens-Johnson syndrome may occur. Phenytoin should be discontinued if a rash appears.
- Extravasation may cause tissue inflammation and necrosis

**CONTRAINDICATIONS/PRECAUTIONS:**

- Hypersensitivity to phenytoin
- Heart block, sinus bradycardia
- IM administration is contraindicated as it may result in muscle necrosis and erratic absorption.
- **Rapid intravenous infusion may precipitate cardiovascular collapse.**
- Concurrent administration of theophylline and phenytoin may result in decreased levels of theophylline. Plasma levels of both drugs should be monitored.

**Nursing Implications**

- Monitor blood levels.
- Assess any residual seizure behavior.
- **Phenytoin is incompatible with dextrose containing solutions. Flush IV with saline before and after administration.**
- Administer by slow IV Push at 0.5 mg/kg/min or less (watch for bradycardia).
DRUG LEVELS:

- Therapeutic trough level: 6 to 15 mcg/ml in the first weeks, then 10-20mcg/ml.
- Check serum level after 72 hours of therapy or earlier if clinically indicated.

References:
1. Neofax 2010
Reviewed/Revised: 02/2011 by

Samir Alabsi, MD
Kelli DeVore, Pharm. D, BCPS
Rebecca Willson, ARNP, NNP