

Drug Name: **Phenytoin Sodium/Fosphenytoin**
Trade Name: **Dilantin/Cerebyx**

REVISED: **November 1, 2018**

Class:

- Prevention and treatment of seizures
- Antiarrhythmic due to digitalis toxicity

Mechanism of Action:

- Sodium Channel Blockade
- Inhibits spread of seizure activity through motor cortex
- Fosphenytoin is converted to the anticonvulsant phenytoin after administration.

Indications:

- Seizure control
- Seizure prophylaxis

Contraindications:

- Hypersensitivity
- Any arrhythmia except those due to digitalis toxicity
- AV-Block
- Bradycardia
- Adams-Stokes syndrome
- Rapid IV administration

Precautions:

- Pregnancy category D (Evidence of Fetal Risk, may be used if benefit outweighs the risk)
- Dilute prior to administration.
- May precipitate hyperglycemia

Dosage:

Doses are highly variable and based on institutional guidelines and patient laboratory values. Double check orders with transferring physician.

Phenytoin
Adults

- Seizure Control/prophylaxis (ADULTS)
 - IV/IO loading dose: 10-15 mg/kg
 - 50 mg/min max administration rate
 - IV/IO Maintenance Infusion: 300 mg/30 minutes
- Arrhythmias due to digitalis toxicity (ADULTS)
 - IV/IO: 100 mg over 5 minutes

PEDS

- Seizure Control/prophylaxis (PEDS)
 - IV/IO loading dose: 10-15 mg/kg
 - 50 mg/min max administration rate
- Arrhythmias due to digitalis toxicity (PEDS)
 - IV/IO: 3-5 mg/kg over 10 minutes.

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REFERENCE ONLY

This document is for **reference only**. Please refer to Physician Order's for specific indications, dosages, and applications

IFT DRUG: Phenytoin/Fosphenytoin

Fosphenytoin: dose expressed in phenytoin equivalents (PE)

- **Seizure Control/prophylaxis (adults)**
 - IV/IO loading dose: 15-20 PE/kg; rate up to 100-150 PE/min
 - Do not administer faster than 150 PE/min.

Onset:

- IV/IO: Onset: (IV) Immediate

Duration:

- Based on infusion duration

Side Effects:

- CNS depression
- Hypotension
- Localized tissue irritation (observe for infiltration)
- Nystagmus/Visual Disturbance
- Purple Glove Syndrome

Interactions:

- Do not administer in dextrose/glucose solutions.
- Amiodarone, Ranitidine, Nifedipine may increase serum Phenytoin levels.

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PEARLS:

Observe and monitor for hypotension and dysrhythmias.

Administer SLOWLY.

- **Must be administered via infusion pump.**
- **Observe and monitor closely for hypotension.**
- If intravenous phenytoin and fosphenytoin is given too rapidly, may result in:
 - Cardiac dysrhythmias including ventricular fibrillation or asystole
 - Severe Hypotension
 - Subcutaneous extravasations of intravenous phenytoin may cause tissue necrosis or pain at the IV site
- **Physician may order Sodium Bicarbonate for suspected toxicity or adverse effects.**

FOSPHENYTOIN

- Prior to IV infusion, dilute CEREBYX in 5% dextrose or 0.9% saline to a concentration of 1.5 to 25 mg PE/mL.
- The maximum concentration of CEREBYX in any solution should be 25 mg PE/mL.
- The safety and efficacy of CEREBYX in pediatric patients have not been established.

PHENYTOIN:

- Phenytoin is only administered with sterile 0.9% sodium chloride diluent in a separate burette and administration set.
- The mixing of phenytoin sodium with other drugs or with intravenous infusion solutions is not recommended because the solubility of phenytoin sodium is such that crystallization or precipitation may result.

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