

Drug Name: **Insulin**
Trade Name: Regular Insulin
REVISED: November 1, 2018

Class:

- Hormone

Mechanism of Action:

- Lowers serum glucose levels.
- Causes an intracellular potassium shift

Indications:

- Hyperglycemia
- Diabetic Keto Acidosis (DKA)
- Hyperosmolar, Hyperglycemic Non-Keatonic Coma (HHNC)
- Hyperkalemia

Contraindications:

- Hypoglycemia

Precautions:

- Pregnancy Class B (presumed safe based on animal studies)
- Beta-blockers

Dosage:

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

- **Infusions:**
 - IV/IO: 0.05-0.1 U/kg/hr
 - Doses are highly patient, age, condition, and physician specific.

Onset:

- IV/IO: Onset: (IV) Immediate

Duration:

- Based on infusion duration

Side Effects:

- Anxiety, agitation,
- Hypoglycemia
- Hypokalemia

Interactions:

IFT

REFERENCE ONLY

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

IFT DRUG: Insulin Infusions

PEARLS:

Observe/monitor for hypoglycemia. Rapid reductions in serum blood glucose levels (More than 100mg/dl per hour) may cause profound cerebral edema and should be avoided.

- Infusion pump is required.
- Common mixtures are:
 - (Adult) 100 units in 100 cc (1 u/ml)
 - (Peds) 50 u in 500 cc NS (0.1 u/ml)
 - (Peds) 25 u in 250 cc NS (0.1 u/ml)
- Targets blood glucose may be patient specific. Clarify prior to transport.
 - **Typically targeted Blood glucose is 80-130 mg/dl**
 - **Consider slowing or stopping (by 50%) infusion if BG drops by more than 50-100 mg/dl in 30 minutes. Contact medical control for guidance.**
- Rapid reductions in serum blood glucose levels (More than 100mg/dl per hour) may cause profound cerebral edema and should be avoided. High risk patients for cerebral edema include patients <5 years of age, those with an initial pH <7.0, newly diagnosed DM patients, and significantly dehydrated patients with marked elevations in BUN.
- May be co-administered with dextrose infusion or potassium depending on circumstances (i.e. treating hyperkalemia, DKA, or HHNC).
- Monitor closely for hypoglycemia. If a BG has not been obtained within 30 minutes, obtain a new one and monitor every 30 minutes thereafter.
- If symptoms of hypoglycemia or other deterioration occur, assess blood glucose, stop infusion, contact medical control, and treat accordingly.

REFERENCE ONLY