

PROCEDURE FOR: Insulin: Continuous Intravenous Administration

3. Perform baseline nursing assessment:
 - a. Record patient's baseline vital signs.
 - b. Baseline blood glucose levels and urine dipstick for Ketones.
4. Prepare equipment:
 - a. Check physician's orders for correct drug dosage and route.
 - b. Check IV bag to verify 100 units regular insulin in 100ml 0.9% NaCl.
 - c. Establish a mainline IV prior to insulin infusion. The type of IV solution will be ordered by the physician.
 - d. Obtain from Pharmacy a 100ml bag of 0.9% NaCl with 100 units regular insulin. Verify that the bag is labeled with a high alert medication sticker which includes the patient name, drug, dosage, time and date.
 - e. Place insulin solution on the Alaris pump. Flush a minimum of 50ml of solution through the tubing and discard.
 - f. Piggyback insulin into mainline IV at the port closest to the patient.
 - g. Before beginning the insulin infusion via the Alaris pump, double check the patient's name, medication label, drug, concentration and dosage with another RN.
 - h. Check blood glucose levels hourly as ordered by MD.
3. Baseline information is needed to establish presence or absence of pre-existing complications.
4.
 - a. A physician's order is necessary to initiate the infusion.
 - c. A primary line is necessary to maintain intravenous access should insulin be discontinued. The primary line is usually a normal saline infusion. Total IV fluid intake is usually run @ 125cc/hr. Once active labor begins or glucose levels decrease to less than 70 mg/dL, the primary infusion is changed to D₅LR.
 - d. 100 units of regular insulin is added to 100ml of 0.9% NaCl to produce a concentration of 1ml = 1 unit insulin.
 - e. An infusion pump is required to ensure accurate flow-rate and precise titration of IV fluids. Total fluids are usually titrated to equal 125ml/hr. Flushing the tubing allows the insulin binding sites on the tubing to become saturated, preventing the mixture of being "robbed" of insulin during the infusion.
 - f. Other medications may be given at the distal port without altering the insulin flow rate.
 - g. Insulin is a high-alert medication requiring a double check by two RNs or an RN and LPN.
 - h. Insulin is easily titrated according to blood glucose levels, if administered as a secondary line.

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- i. Ensure that 50% dextrose solution is available on the unit.
 - j. Ensure that Lactated Ringers is available for a fluid bolus if an epidural is requested.
- i. If severe hypoglycemia occurs, 50% dextrose may be administered per MD order.
 - j. IV fluids without dextrose should be given as a bolus when required prior to epidural placement.
5. Begin insulin infusion per protocol below or as ordered by MD.

Blood Glucose mg / 100 ml	Insulin Dosage unit / hour	WITHOUT ACTIVE LABOR	IN ACTIVE LABOR
		Fluids 125 ml / hr	Fluids 125 ml / hr
< 70	0	D ₅ LR	D ₅ LR
< 100	0	NS	D ₅ LR
100 - 140	1.25	NS	D ₅ LR
141 - 180	1.5	NS	D ₅ LR
181 - 220	2.0	NS	D ₅ LR
> 220	2.5	NS	D ₅ LR

REFERENCES: Pregestational Diabetes Mellitus ACOG Practice Bulletin #60 March 2005

ASSOCIATED

STANDARDS: Nursing Practice Manual:
Procedure: Medications: Double Checks

CREDENTIALS: RN

APPROVAL:

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