

L&D: GDM IDDM in Pregnancy

Guidelines for care of gestational and insulin dependent diabetics during pregnancy

GUIDELINE FOR INTRAPARTUM & POSTPARTUM MANAGEMENT OF CLASS A-1 & CLASS A-2 GESTATIONAL DIABETES AND CLASS B-H DIABETES

I. **Intrapartum management**

A. CLASS A-1 (Diet controlled gestational diabetes)

1. Obtain capillary or venous blood glucose on admission and per provider order in active labor.
2. Notify OB physician on all if > 120mg/dL.

B. CLASS A-2 (Insulin controlled gestational diabetes) and CLASS B-H (insulin controlled diabetes predating pregnancy)

1. The goal of intrapartum insulin therapy is maternal and fetal euglycemia with a maternal glucose less than 90 mg/dL.
2. If labor is induced, patient should arrive on morning of induction NPO, having not taken her AM dose of insulin.
3. **Start two peripheral IV sites** with 18 gauge IV catheter per Lippincott guidelines, "IV catheter insertion" and draw physician ordered blood work at this time.
 - 3.1 Two sites are needed should other IV medications be required (e.g. Pitocin or magnesium sulfate). **Insulin is NOT compatible with other medications** and other medications must be administered in the secondary site (Nursing 2010 drug handbook, 2010).
 - 3.2 Flush and saline-lock second IV site if no further medications are to be given at this time. Maintain IV patency of second IV site by flushing every 8 hours.
4. A mainline IV of D5LR should be established and maintained at a rate of 125cc/hr throughout active labor.
5. Dependent upon blood glucose per MD an order for a premix of regular insulin 250 units in 250 mL normal saline (1unit/1 mL) may be placed.

5.1. Verify concentration and medication upon arrival, **only regular insulin may be given via IV administration.**

6. Using a separate infusion pump chamber with infusion limit, connect IV insulin with attached burette/buretrol set to the port closest to the patient on the mainline infusion.
7. Obtain capillary or venous blood glucose on admission. Dependent on admission result give insulin drip bolus in the indicated dose over 5 minutes. See below table for initial bolus and infusion start rate. **This must be completed using the IV pump with the infusion limit on and checked by two trained RNs.**

IV Drip: 250 units regular insulin in 250mL normal saline (1unit/1mL).

Blood Glucose (mg/dL)	Insulin Bolus (units) ***Only give when FIRST starting infusion	Rate of infusion for Insulin Bolus over 5 Minutes	Insulin Infusion start up (units/hr.)	Insulin Infusion start up rate (mL/hr)
<65	--	--	0.5	0.5
65-99	--	--	1	1
100-125	2	24mL/hr	1	1
126-150	3	36mL/hr	1	1
>150	4	48mL/hr	2	2

After initial bolus is complete DO NOT bolus again.

8. **Repeat capillary blood glucose every 1 hour** and titrate insulin drip per chart below or per physician's orders to maintain a target blood glucose range of 60-90 mg/dL.

Hourly Blood Glucose Result (mg/dL)	Insulin Infusion Rate (units/hr.)
<51	Stop infusion and notify provider. Administer 50 ml D50W per orders and recheck blood glucose in 15 minutes.
51-60	Decrease by 1 unit/hr.
61-90	No change
>90	Increase by 1 unit/hr.

9. The goal is to maintain glucose 60-90 mg/dL to decrease neonatal hypoglycemia.

II. Postpartum management

A. After delivery of the placenta, the insulin resistant state rapidly disappears and gestational diabetics typically do not need further blood glucose monitoring in the immediate post-partum state. However, women with presentational Type I and Type 2 diabetes will still need close glucose monitoring (Kjos, 2011).

1. Check blood glucose on all post-partum diabetic patients per provider's orders and document in patient's EHR.

B. Breastfeeding is encouraged in women with diabetes

1. Maternal hypoglycemia is most likely to occur 1 hour after breastfeeding. **Women with preexisting diabetes should eat a small snack immediately prior to breastfeeding** (Mattson & Smith, 2011).

C. **Class A-1 (diet controlled gestational diabetes).**

1. Instruct patient that glucose tolerance will be re-evaluated at the six-week postpartum check (Mattson & Smith, 2011).
2. Encourage maintenance of exercise and dietary habits learned during pregnancy with a long-term goal of maintaining ideal body weight.
3. Women diagnosed with GDM are at increased risk for developing diabetes (DM2) later in life' (Mattson & Smith, 2011).

D. **Class A-2 (insulin controlled gestational diabetes) and Type 1 and Type 2 (diabetes diagnosed prior to pregnancy)**

1. Monitor blood glucose as ordered and document in EHR.
2. Instruct patient regarding home glucose monitoring frequency/follow-up.
3. Encourage maintenance of exercise and dietary habits learned during pregnancy with a long-term goal of maintaining ideal body weight.
4. Women diagnosed with GDM are at increased risk for developing diabetes (DM2) later in life' (Mattson & Smith, 2011).
5. For class A-2: instruct patient that glucose tolerance will be re-evaluated at the six-week postpartum check.

E. **Notify the provider immediately for the following:**

1. Blood glucose <51 or >120mg/dL.

REFERENCES: Gestational Diabetes Guidelines for Screening, Diagnosis and Management in the Alaska Area

- 1.1. Mattson, S., and Smith, J. (2011). *Core Curriculum for Maternal-Newborn Nursing* (4th ed.). Saint Louis, MO: Saunders Elsevier.
- 1.2. Kjos, S. (2013). Intrapartum and postpartum management of insulin and blood glucose. *UpToDate*. Retrieved from <http://www.uptodate.com/contents/intrapartum-and-postpartum-management-of-insulin-and-blood-glucose?topicKey=OBGYN%2F4441&elapsedTimeMs=3&view=print&displayedView=full#>.
- 1.3. Lippincott (2012). Blood glucose monitoring. Retrieved from <http://procedures.lww.com/lnp/view.do?pId=950918&s=p&fromSearch=true&searchQuery=GLUCOSE>.
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Written: September 1989 Revised 10/94, 09/00
WRITTEN: April 95
REVIEWED: Apr 07
REVISED: December 2014