

# Good complications of presentational diabetes during delivery essay example

[Health & Medicine](#), [Diabetes](#)



## **What is The Best Way to Manage Delivery in Women with Diabetes?**

Diabetes mellitus bear serious implications on both the pregnant mother and the fetus. Gestational diabetes is associated with increased risk of fetal macrosomia. Furthermore, high prevalence of postnatal diabetes among babies has been observed in cases of obesity and diabetes mellitus during pregnancy. In other words, both diabetes mellitus and obesity are serious clinical conditions that need to be managed carefully in order to ensure that the mother and the fetus are safe and free from risks of various complications that are often associated with the two conditions. Delivery is a critical stage that affects both the mother and fetus in the short run and in the long run. Proper management of obesity and diabetes mellitus is very important in influencing the health status of the mother and the fetus during other stages following delivery.

According to a survey done by National diabetic Association in the year 2000, the prevalence of diabetes mellitus was estimated as 171, 228 (American Diabetes Association, 2010). It is projected that by 2030, the estimated prevalence of diabetes will be 366, 212. This increase represents a total percentage change in number of global cases of diabetes of 114%. These statistics project that the global prevalence of diabetes will continue increasing if no intervention is instituted. Data released by National Diabetes Association in 2011 point out that 25. 8 million Americans were living with diabetes mellitus in that year (America Diabetes Association, 2011). Out of this number, the estimated population of women living with diabetes mellitus as stated by the report is 12. 6 million. This estimate represents 10. 8

percent of the total women population living in the United States aged 20 years and above (American Diabetes Association, 2011).

One of the common practices used in managing deliveries in diabetes involves timing and choosing the mode of delivery. Managing deliveries in women suffering from diabetes is complicated and critical given that it may result into various complications to the mother or the fetus in the subsequent stages of life. Most studies agree that births before term are not advisable unless fetal compromise is detected. Therefore, elective births are only necessary in cases whereby the ultrasound reveals macrosomic fetus. Currently-used ultrasound equipment for detection of macrosomia does not give clear evidence of the presence of macrosomic fetus. Various guidelines recommend elective births when macrosomia is detected. However, the exercise is still a challenge even with modern ultrasound technology. Guideline Development Group (2008) recommends that elective births should be offered after completion of thirty eight weeks of gestation. Induction of labour and caesarian section is some of the elective births commonly carried out. In addition, women who have been diagnosed to be carrying macrosomic fetus should be informed of the dangers associated with the elective births. It is important to note that besides Guideline Development Group recommends elective births in cases of macrosomic fetus, it acknowledges that the exercise is associated with various risks. Seshiah and colleagues (2009) also recommend for induction of labour and caesarean section for women diagnosed with diabetes. However, just like Guideline Development Group, Seshiah and colleagues state that delivery before full term should only be considered when evidence of macrosomia,

poor metabolic control, ployhydramnios, or other obstetric indications are noted (Seshiah et al, 2009). According to Henriksen (2008), elective births should not necessarily be applied to the general population since there is no evidence suggesting its necessity. Besides, since its detection is not reliable and it is associated with various risks especially complications of the respiratory systems, it does not have to be applied.

Elective term delivery is associated with several neonatal and maternal outcomes. A study carried out by Clark and colleagues found that elective cesarean sections applied before thirty nine weeks of gestation were associated with 12.5% absolute risk of respiratory outcome at neonatal stage. This risk level was higher than the level recorded for neonates born after thirty nine months. Another study by Hansen, Wisborg, Uldbjerg, and Henriksen also found that new borns delivered by elective caesarean section around term have higher risk of serious respiratory morbidity than their counterparts delivered virginally (2008). Similar findings have been reported by Fogelson and colleagues (2005).

Another way of managing deliveries in women with diabetes involves glycemic control during labour and birth. According to the guidelines given by Guideline Development Group, capillary blood glucose level should be monitored per hour in order to maintain the glucose level within the range of 4mmol/l to 7mmol/l. The guidelines state that if this concentration is not achieved or maintained, insulin infusion and intravenous dextrose are used during the labour and birth period. Seshiah and colleagues (2009) also emphasize on the need to monitor blood glucose level during delivery. However, they caution that care should be taken to avoid hypoglycemia.

Guideline Development Group further recommends that women with type I diabetes should consider infusion of insulin right from the beginning of labour. Besides, it recommends that dextrose infusion be given.

When preterm labour in women with diabetes is necessary, it is advised to use chemicals meant for encouraging lung maturation. For instance, Guideline Development Group states that antenatal steroids can be used. Antenatal steroids are meant for promoting maturation of lung of the fetus. However, antenatal steroids should be administered in combination of insulin in women with diabetes that is characterized by low insulin supply.

Glycemic control is very important in the quest to aid a diabetic woman to undergo safe and successful delivery. Different guidelines agree that glycemic control is indispensable to management of delivery. Seshiah states that glycemic control can be successfully achieved through both good nutrition and pharmacological intervention. Monitoring of glycemic control also helps in assessing the effectiveness of treatment. Some guidelines recommend that human insulin should be used considering that they are immunogenic. Fetal macrosomia is partly induced as a result of the insulin antibodies crossing over into the blood system of the fetus hence stressing the beta cells of the fetus. This in turn increases the production of insulin. High production of insulin is likely to induce macrosomia in the fetus.

Several guidelines agree that insulin use for glycemic control is not necessary once labour begins to occur. However, some sources recommend the use of insulin when the required range within which blood glucose level should be maintained is not achieved. For example, the Guideline Development Group recommends that if blood glucose level is not

maintained within the range of a minimum of 4mmol/l and a maximum level of 7mmol/l, intravenous insulin infusion can be applied. In this case, Guideline Development Group recommends that the infusion should be administered right at the beginning of the labour period until the end. Consistent efforts to maintain blood glucose level within the limits of 4mmol/l and 7mmol/l is very important in ensuring successful delivery and in reducing chances of occurrence of macrosomia in fetus. Macrosomia is common in diabetic women who fail to control their blood glucose level within the narrow range of between 4mmol/l to 7mmol/l during pregnancy. macrosomia usually necessitates delivery through caesarian section. Delivery through caesarian section exhibits various maternal and fetal risks. For instance, caesarian section delivery may lead to partial destruction of the uterine wall. Therefore, it is very important to consistently make efforts to maintain blood glucose level through following good nutrition and lifestyle as well as taking medication according to prescriptions. Most sources agree that glycemic control during the first and the second trimester is very influential to the delivery outcome at the end of the third trimester. Most sources also agree that induction of delivery before 39 weeks of gestation exhibits various adverse neonatal and maternal outcomes. However, this approach is very important whenever macrosomia is detected in the fetus. Nevertheless, the current technology is not effective enough in detecting macrosomia. Several methods have been proposed to aid in detecting macrosomia in the fetus. However, all sources agree that most of those methods have not shown adequate effectiveness and accuracy. Scoring system is one of the methods normally employed to aid in efforts to

detect macrosomia. A study conducted by Chauhan and colleagues (2006) with a view to determining the affectivity of the technique revealed that the method is a poor means of detecting macrosomia in the fetus. In the study, all singletons were identified retrospectively. The singletons also had to be larger for their gestational age. The sizes were stated in terms of abdominal circumference. The singletons were identified at the gestation period beyond 37 weeks of gestation. The result showed that the method was not effective enough in detecting macrosomia.

Most literature sources point out that detection of macrosomia in fetus is very important in determining choice on whether to opt for elective birth on term or not. Elective births are accepted only in situations where macrosomia has been detected. It helps in preventing complications or difficulties that may arise during vaginal delivery.

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