DIABETES – LABOUR

PREPARATION
- Discuss with woman

Time and mode of delivery
- Woman diet-controlled with normally grown fetus:
  - advise induction of labour at 40 weeks’ gestation
- Woman on insulin:
  - advise induction of labour at 38 weeks’ gestation

Analgesia and anaesthesia
- Offer women with diabetes and co-morbidities (e.g. obesity or autonomic neuropathy) obstetric anaesthetic assessment in third trimester

Care during and after labour
- Analgesia and anaesthesia
- Good glycaemic control
- Continuous fetal monitoring
- Prevention of neonatal hypoglycaemia
- Care of baby/breastfeeding

PRETERM LABOUR
- Pulmonary maturation delayed in fetuses of diabetic women, particularly where control has been poor
- Where premature delivery anticipated, give betamethasone for women with established diabetes – see Preterm labour guideline
- Steroid administration worsens diabetic control and may lead to ketoacidosis in women with pre-existing type 1 diabetes – anticipate an increase in insulin requirement and administer insulin as per local Trust policy for steroids in diabetic pregnancy

INDUCTION OF LABOUR
- See Induction of labour guideline

Diabetic control
- Before labour established, normal metformin/insulin regimen and diet

DURING LABOUR
Risk
- Increased risk of shoulder dystocia particularly if baby macrosomic – ensure obstetric registrar is available on delivery suite during second stage – see Shoulder dystocia guideline
- Increased risk of cephalopelvic disproportion – be vigilant for delay and, if occurring, use oxytocin with caution

Monitoring during labour
Woman
- Record capillary glucose level hourly
- Once sliding scale regimen commenced, monitor blood glucose hourly
- Monitor blood glucose at 30 min intervals after induction of general anaesthesia and birth of baby until woman fully conscious
- Check urine for ketones

Continuous fetal monitoring
- Maternal hyperglycaemia may cause fetal acidosis, check maternal glucose if any EFN abnormalities
• Fetal blood sampling if indicated as normal labour – see Fetal blood sampling guideline

Metformin and diet controlled
• If blood glucose elevated e.g. persistently above Unit threshold, commence insulin and IV fluid regimen below

Gestational diabetes mellitus
• Insulin controlled – Dependent on amount of insulin required – dosage as per local Trust policy

Elective caesarean section
• If caesarean section carried out before 39 weeks’ gestation, consider administration of antenatal steroids. This will require sliding scale
• If not on sliding scale for steroids, give usual metformin/insulin day before procedure
• Nil-by-mouth from midnight
• Commence insulin and fluid regimen from 0600 hr. See below

Emergency caesarean section
• Check blood glucose level and commence insulin and IV fluid below

INSULIN AND IV FLUID REGIMEN
• 500 mL glucose 10% with 10 mmol potassium chloride 8-hrly
• 50 units soluble insulin (Actrapid/Humulin S) in 50 mL sodium chloride 0.9% via syringe pump according to blood glucose checked at time of admission and hourly thereafter by glucometer
• Determine rate of fluid infusion depending on blood glucose concentration and local policy
• Aim to keep woman’s blood glucose concentration between 4–9 mmol/L
• Most women will need 2–4 units/hour
• Avoid large changes in insulin infusion rate and therefore in glucose concentration
• If blood glucose not maintained within normal range, contact diabetes team

Always use commercially produced pre-mixed bags of glucose 10% with potassium

POSTNATAL MANAGEMENT
• Diabetes team will write management plan

Inform women with insulin-treated diabetes that they are at increased risk of hypoglycaemia in postnatal period, especially when breastfeeding. Advise to have a meal or snack available before or during feeds

Stopping insulin and fluid regimen
• Continue sliding scale regimen until able to eat and drink normally

Type 1 diabetes
• Revert to pre-pregnancy reduced insulin requirements or the regimen advised by diabetes team
• Keep sliding scale running for 30–60 min after first subcutaneous insulin dosage
• May require less insulin if planning to breastfeed
• Review by diabetes team as appropriate

Type 2 diabetes
• Stop insulin and fluid regimen
• Revert to pre-pregnancy regime
• Review blood glucose
• Metformin not contraindicated in breastfeeding, but avoid sulphonylureas
Gestational diabetes
- Women with gestational diabetes mellitus who have required sliding scale will cease to need insulin after delivery
- Arrange postnatal OGTT or fasting blood glucose at 6 weeks

Neonatal care
- See Staffordshire, Shropshire & Black Country Newborn Network Hypoglycaemia guideline or follow local practice

Future plans
- While still using contraceptives, mother to discuss future pregnancy with diabetes team who will provide information on pre-conception care