

Breastfeeding and Medication



Diabetes and Breastfeeding

There are basically 2 types of diabetes but the treatment of the two can become blurred by control of blood sugars. In addition, pregnant mothers may develop gestational diabetes which resolves on delivery.

Type 1 diabetes is an auto-immune disease caused by the destruction of the insulin producing beta cells in the pancreas. There is a genetic component in the development, but it is triggered by environmental factors such as early introduction of cow's milk protein, viral infections, and exposure to toxins. It normally develops in childhood.

Type 2 Diabetes is associated with obesity and metabolic syndrome. The incidence is increasing in the western world. Insulin is produced but cell receptors do not respond.

Type 1 diabetes

Type 1 (insulin dependent diabetes) is treated with insulin of various forms depending on the blood glucose control. Insulin is too large a molecule to get into breastmilk and breastfeeding can continue as normal. The mother should monitor blood sugars frequently and be aware of the risk of "hypos" overnight if she is feeding frequently.

If insulin levels are unstable in pregnancy the baby may be born large for dates. Miscarriage, pre-eclampsia and preterm labour are more common in women with pre-existing diabetes. Mothers with diabetes are at risk of developing pre-eclampsia and should take 75mg aspirin daily from 12 weeks pregnancy until delivery. Women with diabetes [planning pregnancy should take 5mg (rather than 400 mcg) folic acid pre-conceptually and until 12 weeks pregnant.

Fasting blood sugars are lower during exclusive breastfeeding. Milk production may be limited with unstable insulin levels. There is a period of hypoglycaemia after delivery following which Insulin requirements may be reduced by 27% (Davies 1989), In another study (Whichelow 1983) diabetic

©Dr Wendy Jones MBE Pharmacist Breastfeeding and Medication

www.breastfeeding-and-medication.co.uk

March 2020 *The information on this sheet is based upon my professional experience as a pharmacist with a specialised interest in the safety of drugs in breastmilk, supported by evidence from expert sources. However, I cannot take responsibility for the prescription of medication which remains with the healthcare professionals involved. I am happy to discuss the evidence by email wendy@breastfeeding-and-medication.co.uk*

mothers increased their carbohydrate intake by 50g whilst breastfeeding whilst requiring 40 units insulin compared with 45 units pre-pregnancy.

Immediately after delivery carbohydrate snacks should be available and glucose tablets to counteract any hypoglycaemia. Mothers should be reminded to have snacks available during nighttime feeds and to monitor blood glucose levels if necessary, in order to adjust insulin requirements. The DAME study (Forster 2017) recommended colostrum harvesting to stabilise the baby's blood sugars until the mother's milk comes in.

Type 1 diabetes has some association with being fed with artificial formula as a baby.

Type 2 Diabetes

Type 2 diabetes is often, but not always, associated with obesity. If diet alone does not control symptoms, then metformin is usually the first-line drug choice. Metformin is compatible with normal breastfeeding. There is no data on any of the other oral drugs used to treat type 2 diabetes and it may therefore be necessary to initiate insulin.

Type 2 diabetes is becoming increasingly common. It is often associated with being overweight or inactive, or having a family history of type 2 diabetes.

It can cause symptoms like excessive thirst, needing to pass urine frequently and tiredness. If uncontrolled by diet alone it involves taking medication – normally metformin which can have side effects of diarrhoea. Early lifestyle interventions can prevent further development and reverse the diagnosis.

Medical treatment usually commences with metformin which is compatible with breastfeeding and does not affect the baby's blood sugar levels. There is no data on any of the other oral drugs used to treat diabetes which should therefore be avoided. If metformin does not achieve control of blood sugars a breastfeeding mother may need to initiate insulin for the duration of her lactation.

There is no data on:

- **Sulfonylureas;** Glibenclamide, Gliclazide, Glimepiride, Glipizide, Tolbutamide
- **Dipeptidylpeptidase – 4 – inhibitors** (Gliptins): Alogliptin, Linagliptin, Saxagliptin, Vildagliptin
- **Glucagon-like peptide1 receptor agonists:** Albiglutide, Dulaglutide , Exanatide, Liraglutide, Lixisenatide
- **Meglitinides:** Nateglinide , Repaglinide
- **Thioglitazones:** Pioglitazone

©Dr Wendy Jones MBE Pharmacist Breastfeeding and Medication

www.breastfeeding-and-medication.co.uk

March 2020 *The information on this sheet is based upon my professional experience as a pharmacist with a specialised interest in the safety of drugs in breastmilk, supported by evidence from expert sources. However, I cannot take responsibility for the prescription of medication which remains with the healthcare professionals involved. I am happy to discuss the evidence by email wendy@breastfeeding-and-medication.co.uk*

Gestational Diabetes

Gestational diabetes may be treated with metformin or insulin. These medications have no implications for colostrum harvesting

Gestational Diabetes is described as impaired glucose tolerance in pregnancy. It is also increasing in prevalence due to increasing obesity rates and now affects some 7% of pregnancies. Most women will need oral metformin to reduce blood glucose or insulin if changes in diet and exercise do not control it effectively. Risk factors for gestational diabetes are.

- BMI above 30 kg/m²
- previous macrosomic baby weighing 4.5 kg or above or previous gestational diabetes
- family history of diabetes (first-degree relative with diabetes)
- minority ethnic family origin with a high prevalence of diabetes.

Kjos (1993) recommended that delivery should be contemplated at 38 weeks and, if not pursued, careful monitoring of foetal growth should be performed to reduce the risk of large for gestational age babies and shoulder dystocia.

Medication is normally discontinued after delivery although a proportion of mothers will go on to develop Type 2 diabetes. Women with gestational diabetes who do not breastfeed are twice as likely to develop future diabetes (Kjos 1993).

References

- Brown A, Jones W A guide to supporting breastfeeding for professionals . Routledge 2019
- Davies HA, Clark J. D., Dalton K. J., and Edwards O. M. Insulin requirements of diabetic women who breast feed. BMJ. 1989 May 20; 298(6684): 1357–1358.
- Forster, D A, Moorhead AM, Jacobs SE, , Davis PG, Walker SP, McEgan KM, Opie GF, Donath SM, Gold L, McNamara C, Aylward A, East C, Ford R, Amir LH, Advising women with diabetes in pregnancy to express breastmilk in late pregnancy (Diabetes and Antenatal Milk Expressing [DAME]): a multicentre, unblinded, randomised controlled trial. The Lancet 2017;389: 2204 – 2213
- Jones W Breastfeeding and Medication 2nd Ed 2018 Routledge UK
- Kjos SL, Henry OA, Montoro M, Buchanan TA, Mestman JH. Insulin-requiring diabetes in pregnancy: a randomized trial of active induction of labor and expectant management. Am J Obstet Gynecol. 1993 Sep;169(3):611-5.
- NICE Diabetes in pregnancy: management from preconception to the postnatal period NG3
- NICE Hypertension in pregnancy: diagnosis and management CG107 #
- Whichelow MJ, Doddrige MC. Lactation in diabetic women. Br Med J (Clin Res Ed) 1983; 3;287(6393):649–650).

©Dr Wendy Jones MBE Pharmacist Breastfeeding and Medication

www.breastfeeding-and-medication.co.uk

March 2020 *The information on this sheet is based upon my professional experience as a pharmacist with a specialised interest in the safety of drugs in breastmilk, supported by evidence from expert sources. However, I cannot take responsibility for the prescription of medication which remains with the healthcare professionals involved. I am happy to discuss the evidence by email wendy@breastfeeding-and-medication.co.uk*