

Breastfeeding and Medication



Propranolol and Breastfeeding

Compatible with breastfeeding because of low levels transferred into breastmilk determined in studies. Used to treat high blood pressure, anxiety, prevent migraines and to relieve symptoms of over active thyroid

Beta blockers are used to treat many different conditions but I am most frequently asked about the use of propranolol to prevent migraines, to relieve the symptoms of hyper-thyroidism and also to treat anxiety as it helps so much with panic attacks. It is safe and widely used by breastfeeding mothers. Propranolol, along with other beta blockers should be avoided by mothers with asthma as it can precipitate an asthma attack.

Immediately after birth to treat blood pressure

In many maternity units the use of beta blockers triggers the hypoglycaemia policy involving blood sugar testing. The amount of propranolol passing into breastmilk is low and less likely to lower blood sugars than atenolol (which has low plasma protein binding and passes more extensively into milk). The risk to the baby stems from the fact that babies born to mothers with pre-eclampsia may be born (or induced) early or may have experienced intra-uterine growth retardation. The efficacy of the baby's feeding and milk transfer should be assessed as well as blood sugars. If necessary, the mother may need to hand express and syringe/cup/spoonfeed colostrum to her infant.

Migraine

Preventive treatment may be appropriate if the mother suffers at least two attacks a month, an increasing frequency of headaches, suffers significant disability despite suitable treatment for migraine attacks, or cannot take suitable treatment for migraine attacks. Propranolol works well for many women.

Anxiety

Having a baby is an exciting time, full of intense emotions. Anxiety about getting everything right is normal but too much anxiety can interfere with the ability to cope with daily activities – and with

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August 2018 *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*

enjoying life. Anxiety is more common than depression after delivery. It affects one in six mothers (one in five first-time mums). It isn't the same as depression but it can also disrupt life with a newborn. Commonly new mothers will say: 'my thoughts are racing, I can't focus on anything, I find it hard to make decisions, I'm worried constantly that there may be something wrong with the baby, I can't relax'.

One of the common symptoms is a racing heart which can be really disturbing especially during the night. Propranolol like the other beta blockers is often used for anxiety, stress and panic.

Hyper – thyroid symptoms

The main types of drugs used to treat hyperthyroid symptoms are carbimazole and propylthiouracil. It can take a month or two before benefit is obvious. In the meantime beta blockers (usually propranolol) are used to reduce symptoms which can include nervousness, anxiety and irritability, hyperactivity, mood swings, difficulty sleeping, feeling tired all the time and sensitivity to heat

Passage into breastmilk

Brand name: Inderal®, Inderal LA®, Half Inderal®

Propranolol is almost completely absorbed from the gastrointestinal tract but undergoes first-pass metabolism. It is highly lipid soluble and is approximately 90% plasma protein bound. It has at least one active metabolite but the impact of this is unclear. The half-life of propranolol is three to six hours. It is used to treat children with hypertension initially at a dose of 1 mg per kilogram but can be increased to 2–4 mg per kilogramme per day in divided doses. It is also used to prevent migraines in children under the age of 12 at a dose of 20 mg two or three times daily. It crosses the blood–brain barrier and the placenta. It is present in breastmilk.

In a study of three women (Smith 1983) it was calculated that the maximum dose likely to be ingested by a breastfed infant would be less than 0.1% of the maternal dose. A m/p ratio range of 0.33 to 1.65 was reported. Bauer et al. (1979) estimated that the maximal dose of cumulative propranolol to which a breastfed infant would be exposed at a maternal dose of 40 mg four times daily would be 21 µg per 24 hours. This dose is considerably less than the therapeutic dose of propranolol for infants. No adverse effects have been reported in breastfed infants whose mothers were receiving propranolol. The relative infant dose is quoted as 0.3–0.5% (Hale 2017 online access).

The BNF recommends that the amount of most beta blockers in breastmilk is probably too small to be harmful although it is advisable to monitor the infant for possible symptoms of beta-blockade.

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References

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