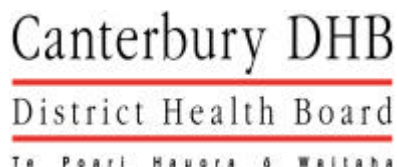


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SAFETY OF EFORMTEROL AND SALMETEROL IN BREASTFEEDING

Question:

What is the safety of eformoterol in breastfeeding?

Answer:

We are not aware of any data describing the transfer of long-acting beta(2)-agonists (eformoterol, salmeterol) into breast milk^[1-4]. Following inhalation of standard therapeutic doses, eformoterol and salmeterol can be detected in plasma in very low concentrations, if sensitive assays are used^[5]. This suggests that transfer into milk is likely to be very low.

We suggest that salmeterol is used in preference to eformoterol, because the former has higher protein binding (99% vs 64%, respectively) which will restrict transfer into milk^[5]. For salmeterol, the oral infant dose can be estimated to be around 1 - 2% of the inhaled maternal dose, weight-adjusted*. This is much less than the notional cut-off of 10% that has been used to guide safety in lactation^[6]. By comparison, the dose for eformoterol may be slightly higher, at approximately 4%*.

**Assumptions:* maternal dose of inhaled salmeterol and eformoterol is 100 mcg/day and 24 mcg/day, respectively; maternal weight is 60 kg; peak plasma concentrations for inhaled salmeterol and eformoterol are 50 mcg/L and 0.1 mcg/L, respectively; the milk to plasma concentration ratio is 3.0 (worse-case scenario) and the infant ingests 0.15 L/kg/day of milk.

Conclusions:

We are not aware of any data describing the transfer of eformoterol or salmeterol into breast milk. Standard therapeutic doses of inhaled eformoterol or salmeterol would seem unlikely to pose problems when breastfeeding healthy term infants because of low maternal systemic exposure. However, risk:benefit assessment is required. If the decision is made to use salmeterol, we recommend dosing after a feed to help minimise infant exposure and monitoring the infant for evidence of adverse effects such as jitteriness, facial flushing and poor suckling.

References:

1. Drugdex, Micromedex database
2. Medline database 1966-2002
3. Embase database 1988-2002
4. Briggs GG *et al.* Drugs in Pregnancy and Lactation (6th ed), 2002
5. Dollery C. Therapeutic drugs (2nd ed), 1999
6. Bennett, PN. Drugs and Human Lactation (2nd ed), 1996

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