

## DRUG INFORMATION

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### SAFETY OF METRONIDAZOLE IN BREASTFEEDING

#### Question:

What is the safety of metronidazole in breastfeeding?

#### Answer:

The safety of metronidazole in breastfeeding has been controversial. However, there are numerous reports describing significant transfer of metronidazole into breast milk, with concentrations in milk being similar to those in maternal blood<sup>[1-10]</sup>. The infant is likely to receive 7-36% of the maternal dose when adjusted for the difference in body weight<sup>[3,4,7,8,11]</sup>. This is considerably higher than the usual accepted cut-off of 10%<sup>[5]</sup>.

There are isolated reports associating metronidazole with causing adverse effects in breastfed infants. Metronidazole exposure via breast milk has been reported to cause diarrhoea, secondary lactose intolerance and anorexia and vomiting (no further details are available)<sup>[4,5,7,8]</sup>. Causality is difficult to establish. Metronidazole may adversely flavour milk and impart a bitter taste<sup>[3]</sup>.

Metronidazole is reported to be mutagenic and carcinogenic in some animal species<sup>[4]</sup>. Based on theoretical concerns about exposure to a potential mutagen and the unknown consequences of metronidazole exposure via milk, the American Academy of Pediatrics advised that metronidazole is not compatible with breastfeeding. They also recommend that at least 12 to 24 hours should elapse after either a single 2g dose or discontinuation of a seven day treatment regimen<sup>[1]</sup>.

#### Conclusions and recommendations:

There are conflicting reports regarding the safety of metronidazole during breastfeeding. The transfer of metronidazole into human milk is highly variable ranging from 7-36% of the weight-adjusted maternal dose. Adverse effects in the infant have been described that have been attributed to metronidazole exposure. As with any drug, the use of metronidazole during breastfeeding must be considered in terms of risks and benefits. In general, we would advise that alternative antibiotics that are established as safe (eg. amoxicillin/clavulanic acid) are used in preference to metronidazole. If the mother elects to continue breastfeeding while taking metronidazole, we recommend the following for healthy term infants:

- (1) If using a stat 2g oral dose OR greater than 1500mg/day intravenously - avoid breastfeeding for the following 24 hours;
- (2) If using 200mg orally three to four times daily OR 500mg rectally twice a day - continue breastfeeding;
- (3) If using 400mg orally three to four times daily OR 500mg rectally/intravenously three times a day - alternate breastfeeding with bottle feeding;

To minimise infant exposure, the dose should be taken immediately after feeding the infant. The infant should also be monitored for signs of toxicity such as diarrhoea, vomiting, poor suckling and blood dyscrasias.

For premature infants, or those with significant renal or hepatic disease, specialist consultation is advised.

References:

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11. Passmore CM *et al.* Br J Clin Pharmacol 1988; 26: 45-51.

Date prepared:

June 2002

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