

# Breastfeeding and Medication



## Breastfeeding and Midazolam

Mothers exposed to midazolam as a sedative for procedures such as colonoscopy or dental procedure can breastfeed as normal if the baby is more than 2 months of age.

To err on the side of safety mothers of younger babies should aim to wait for 4 hours before feeding again. They may need to pump to reduce the risk of engorgement during this time.

Midazolam is widely used as a sedative for short procedures such as endoscopy, dental sedation or pre-anaesthesia. It produces twilight sleep rather than unconsciousness and limits memory of the procedure.

Midazolam has a short elimination half-life of about two hours. The half-life of midazolam is prolonged in neonates but it is used extensively in procedures on neonates and pre-term infants. Extensive first-pass metabolism results in a low systemic bio-availability after oral doses so levels reaching the infant's bloodstream from breastmilk can be expected to be low and unlikely to affect the baby.

In a study of 12 women receiving 15 mg daily for up to six days as a hypnotic, neither midazolam nor its metabolite could be detected in breastmilk four hours after administration and the maximum level measured was 9 ng per millilitre between one and two hours after administration (Matheson et al. 1990). Thus breastfeeding can be continued without interruption after use of this short-acting benzodiazepine.

Qureshi et al. (2005) recommended waiting for four hours after the use of midazolam in endoscopy procedures. However, this may not be necessary where the baby is more than 2 months of age. Below this age the baby has incomplete renal and liver function and may be slower to metabolise the drug to which it is exposed via breastmilk. The risk is that the baby may be temporarily drowsy rather than harmed by exposure.

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Koitabashi et al. (1997) measured the levels of midazolam and its metabolites in breastmilk following a single 6 mg intravenous dose of midazolam. After four hours, levels were undetectable. Lee and Rubin (1993), Spigset (1994) and Nitsun et al. (2006) recommend that mothers can resume breastfeeding as soon as the mother feels recovered enough i.e is awake and alert.

Midazolam is 97% plasma protein bound and has a half life of 3 hours. The relative infant dose is quoted as 0.6% whilst the limit above which drugs are regarded as less safe is 10% giving a considerable margin of safety for the mother to feed as normal (Hale 2017 online access).

The BNF states that it is present in breastmilk and that the manufacturer advises interruption of breastfeeding for 24 hours.

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