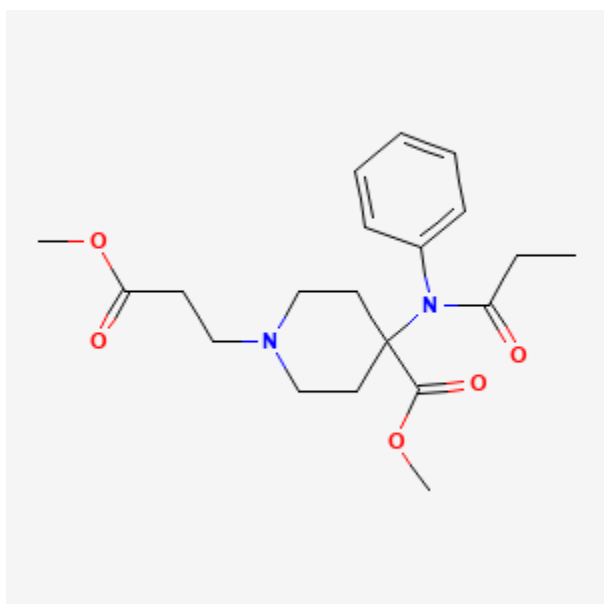




Remifentanil

Revised: December 15, 2023.

CASRN: 132875-61-7



Drug Levels and Effects

Summary of Use during Lactation

Because the half-life of remifentanil is extremely short, it is unlikely to cause any adverse effects in the breastfed newborn if it is given to the mother for labor analgesia or a surgical procedure. Maternal use of opioids during breastfeeding can cause infant drowsiness, which may progress to rare but severe central nervous system depression. Newborn infants seem to be particularly sensitive to the effects of even small dosages of narcotic analgesics. If remifentanil is required by the mother of a newborn, it is not a reason to discontinue breastfeeding; however, once the mother's milk comes in, it is best to provide pain control with a nonnarcotic analgesic and limit maternal intake of remifentanil to a few days with close infant monitoring. If the baby shows signs of increased sleepiness (more than usual), difficulty breastfeeding, breathing difficulties, or limpness, a physician should be contacted immediately. Because no information is available on the use of remifentanil during

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breastfeeding, an alternate drug may be preferred if the mother requires prolonged administration of remifentanyl during the early postpartum period.

Drug Levels

Remifentanyl is administered intravenously and has a half-life of about 3 minutes in adults. Its oral bioavailability is unknown.

Maternal Levels. Relevant published information was not found as of the revision date.

Infant Levels. Relevant published information was not found as of the revision date.

Effects in Breastfed Infants

Four mothers who were breastfeeding their infants received remifentanyl as part of their general anesthesia for surgical procedures. All patients also received intravenous propofol and rocuronium, and inhaled xenon as part of the anesthesia. They were given doses of remifentanyl that targeted a serum concentration of 4.5 mcg/L during the procedure and reduced to achieve a target concentration of 1.5 mcg/L at the end of anesthesia. Individual infants were first breastfed as follows: 1.5 hours, 2.8 hours, 4.6 hours, and 5 hours after extubation. No signs of sedation were observed in any of the infants.[1]

Effects on Lactation and Breastmilk

Narcotics can increase serum prolactin.[2,3] However, the prolactin level in a mother with established lactation may not affect her ability to breastfeed.

A double-blind, randomized study compared patient-controlled intravenous (IV) analgesia with remifentanyl (n = 43) to a continuous meperidine infusion (n = 45) for labor analgesia. Patients receiving remifentanyl used an average total dosage of 1035 mcg/kg and those receiving meperidine received an average total dosage of 150 mg/kg. Breastfeeding difficulties were experienced in 6.3% of the infants of mothers who received remifentanyl and 12.8% of infants whose mothers received meperidine; however, this difference was not statistically significant.[4]

Alternate Drugs to Consider

Acetaminophen, Butorphanol, Fentanyl, Hydromorphone, Ibuprofen, Morphine

References

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2. Tolis G, Dent R, Guyda H. Opiates, prolactin, and the dopamine receptor. J Clin Endocrinol Metab 1978;47:200-3. PubMed PMID: 263291.
3. Frecska E, Perenyi A, Arato M. Blunted prolactin response to fentanyl in depression. Normalizing effect of partial sleep deprivation. Psychiatry Res 2003;118:155-64. PubMed PMID: 12798980.
4. Evron S, Glezerman M, Sadan O, et al. Remifentanyl: a novel systemic analgesic for labor pain. Anesth Analg 2005;100:233-8. PubMed PMID: 15616083.

Substance Identification

Substance Name

Remifentanyl

CAS Registry Number

132875-61-7

Drug Class

Breast Feeding

Lactation

Milk, Human

Analgesics, Opioid

Narcotics

Anesthetics, Intravenous

Opiates