



Nitric Oxide

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CASRN: 10102-43-9



Drug Levels and Effects

Summary of Use during Lactation

No information is available on breastfeeding during the therapeutic use of nitric oxide by inhalation. Nitric oxide has a half-life of only a few seconds, so exogenously administered nitric oxide cannot reach the breastmilk. Nitric oxide is metabolized to methemoglobin and nitrate, which are present in the maternal systemic circulation. Although maternal nitrate serum levels may be elevated during nitric oxide administration,[1-3] this does not result in elevated breastmilk nitrate levels.[4,5] Both nitric oxide and nitrate are normal components of human milk,[6-8] and nitric oxide is administered directly to newborns by inhalation to treat respiratory failure. Given the above, it appears to be acceptable to breastfeed during maternal nitric oxide inhalation therapy.

Disclaimer: Information presented in this database is not meant as a substitute for professional judgment. You should consult your healthcare provider for breastfeeding advice related to your particular situation. The U.S. government does not warrant or assume any liability or responsibility for the accuracy or completeness of the information on this Site.

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Drug Levels

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

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

Effects on Lactation and Breastmilk

Nitric oxide produced locally in the breast may have a role in the letdown reflex at the initiation of lactation. It results in high concentrations of nitrates and nitrites in breastmilk just prior to an increase in milk production. [9] Nitric oxide may also be involved with nipple erection.[10]

References

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Substance Identification

Substance Name

Nitric Oxide

CAS Registry Number

10102-43-9

Drug Class

Breast Feeding

Lactation

Anti-Asthmatic Agents

Antioxidants

Autonomic Agents

Bronchodilator Agents

Cardiovascular Agents

Endothelium-Dependent Relaxing Factors

Free Radical Scavengers

Neurotransmitter Agents

Peripheral Nervous System Agents

Respiratory System Agents

Vasodilator Agents