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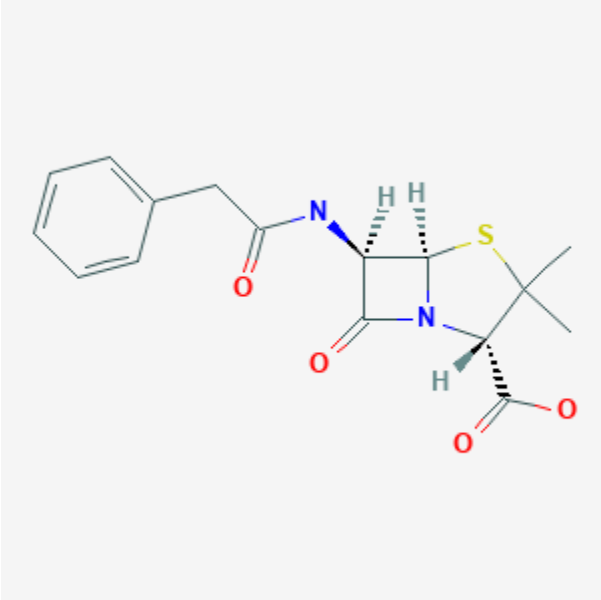
Penicillin G

Revised: October 31, 2018.

CASRN: 61-33-6



Drug Levels and Effects

Summary of Use during Lactation

Limited information indicates that penicillin G produces low levels in milk that are not expected to cause adverse effects in breastfed infants. Occasionally disruption of the infant's gastrointestinal flora, resulting in diarrhea or thrush have been reported with penicillins, but these effects have not been adequately evaluated. Penicillin G is acceptable in nursing mothers.

Drug Levels

Maternal Levels. Ten women were given 100,000 units of penicillin G intramuscularly as a single dose or every 2 hours for 6 hours. Milk levels at 1 to 2 hours after the dose ranged from unmeasurable to 30 units/L after a single dose and an average of 50 units/L after multiple doses.[1]

A single dose of penicillin G was given intramuscularly to 10 women. With doses of 200,000 units in 4 women, milk levels were about 60 units/L and were relatively constant for 6 hours after the dose. With doses of 500,000 units in 4 women, milk levels of penicillin reached 240 units/L at 2 to 4 hours after the dose. With 600,000 units in 2 women, peak levels of 240 to 360 units/L occurred at 4 hours after the dose.[2]

After 2 doses of 2 million units of penicillin G intramuscularly in 15 women, peak milk levels were 120 units/L and trough levels were 10 units/L. After 2 doses of 4 million units of penicillin G intramuscularly in 5 women, peak milk levels were 220 units/L and trough levels were 30 units/L. With both doses, peak levels occurred 3 to 6 hours after the dose.[3]

After a dose of 360 mg (about 550,000 units) of penicillin G intramuscularly in 2 women, milk levels averaged 0.35 mg/L (530 units/L) at 1 hour, 0.2 mg/L (300 units/L) at 2 hours, and 0.1 mg/L (150 units/L) at 4 hours after the dose. Only a trace was detectable at 6 hours after the dose.[4]

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

Effects in Breastfed Infants

A breastfed 1-month-old infant with congenital syphilis developed a Herxheimer reaction 6 hours after its mother received 2.4 million units of benzathine penicillin G intramuscularly. However, the baby had also received 10 units of penicillin G at about the same time as the mother's injection. The reaction was possibly caused by penicillin in breastmilk.[5]

Effects on Lactation and Breastmilk

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

References

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3. Borderon E, Soutoul JH et al. [Excretion of antibiotics in human milk]. Med Mal Infec. 1975;5:373-6.
4. Matsuda S. Transfer of antibiotics into maternal milk. Biol Res Pregnancy. 1984;5:57-60. PubMed PMID: 6743732.
5. Rollier R, Rollier M, Bellouchi M. [Herxheimer's reaction in maternal milk in early congenital syphilis.] Bull Soc Fr Dermatol Syphiligr 1967;74:178-80. PubMed PMID: 6070262.

Substance Identification

Substance Name

Penicillin G

CAS Registry Number

61-33-6

Drug Class

Breast Feeding

Lactation

Anti-Infective Agents

Antibacterial Agents

Penicillins