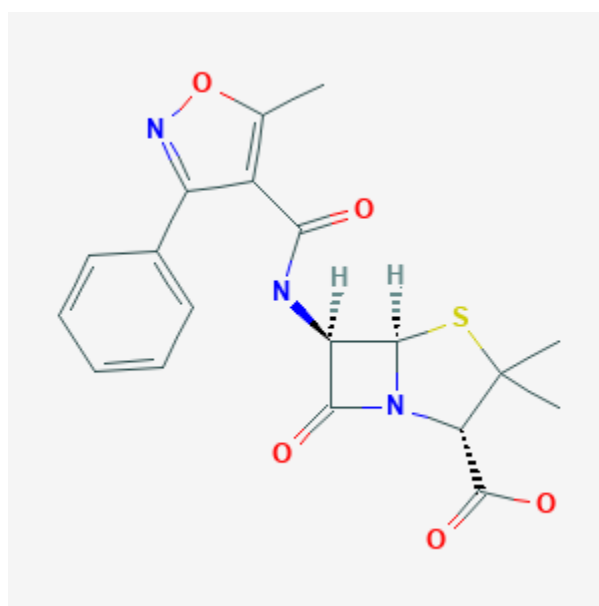




## Oxacillin

Revised: October 31, 2018.

CASRN: 66-79-5



## Drug Levels and Effects

### Summary of Use during Lactation

Limited information indicates that oxacillin 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. Oxacillin is acceptable in nursing mothers.

**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.* After 3 to 4 doses of oxacillin 500 mg orally in 10 women, the highest level detected was 0.2 mg/L in two women 4 hours after the dose. In the other 8 women, milk levels were less than 0.2 mg/L at times between 1 and 3.75 hours after the dose.[1]

One woman received oral oxacillin 3 grams daily. After the third dose, milk oxacillin levels ranged from 0.04 to 0.1 mg/L, with the peak occurring at 3 hours after the dose. The authors estimated that a breastfed infant would receive 0.3 mg daily of oxacillin in milk.[2]

In 10 women with mastitis who received 1 gram of oxacillin orally 3 times daily for 5 to 6 days, the average milk concentrations ranged from 0.43 to 0.68 mg/L.[3]

Repeated injections of oxacillin 1 gram intramuscularly every 6 hours for 6 to 9 days in 15 women with monolateral mastitis yielded oxacillin milk levels that reached a peak of 0.49 mg/L at 3 hours after the first dose on the first day in the healthy breast, and somewhat lower levels in the breast with mastitis. After the last dose, peak milk levels of 0.64 mg/L occurred 6 hours after the dose in the unaffected breast with slightly lower levels in the breast with mastitis.[4]

After a single intramuscular dose of 500 mg of oxacillin in 2 women, milk levels ranged from 0.18 to 0.7 mg/L between 1 and 4 hours, with the peak occurring at 2 to 4 hours after the dose. Only a trace was detectable at 6 hours after the dose.[5]

In 15 women given a single 1 gram dose of oxacillin intravenously, milk levels averaged 0.68 mg/L at 2 hours after the dose.[6]

*Infant Levels.* Ten women with mastitis received 1 gram of oxacillin orally 3 times daily for 5 to 6 days. Oxacillin was detectable in the urine in 5 of 6 of the breastfed infants in whom it was measured. Urine concentrations ranged from 0.2 to 3.7 mg/L.[3]

## Effects in Breastfed Infants

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

## Effects on Lactation and Breastmilk

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

## Alternate Drugs to Consider

(Methicillin-resistant Staph. aureus) [Doxycycline](#), [Linezolid](#), [Minocycline](#), [Trimethoprim-Sulfamethoxazole](#), [Vancomycin](#)

## References

1. Prigot A, Froix CJ, Rubin E. Absorption, diffusion, and excretion of a new penicillin, oxacillin. *Antimicrob Agents Annu.* 1962;2:402-10.
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3. Peiker G, Schroder S. [The concentration of oxacillin and ampicillin (Penstabil) in mother's milk in puerperal mastitis.] *Pharmazie.* 1986;41:793-5. PubMed PMID: 3562514.
4. Kulakov VI, Zak IR, Kulikova NN, Smekuna FA. [Body pharmacokinetics of methicillin, oxacillin and cephaloridine in puerperal mastitis]. *Antibiotiki.* 1981;26:110-3. PubMed PMID: 7212690.
5. Matsuda S. Transfer of antibiotics into maternal milk. *Biol Res Pregnancy.* 1984;5:57-60. PubMed PMID: 6743732.

6. Zhang Y, Zhang Q, Xu Z. [Tissue and body fluid distribution of antibacterial agents in pregnant and lactating women]. Zhonghua Fu Chan Ke Za Zhi. 1997;32(5):288-92. PubMed PMID: 9596854.

## Substance Identification

### Substance Name

Oxacillin

### CAS Registry Number

66-79-5

### Drug Class

Breast Feeding

Lactation

Anti-Infective Agents

Antibacterial Agents

Penicillins