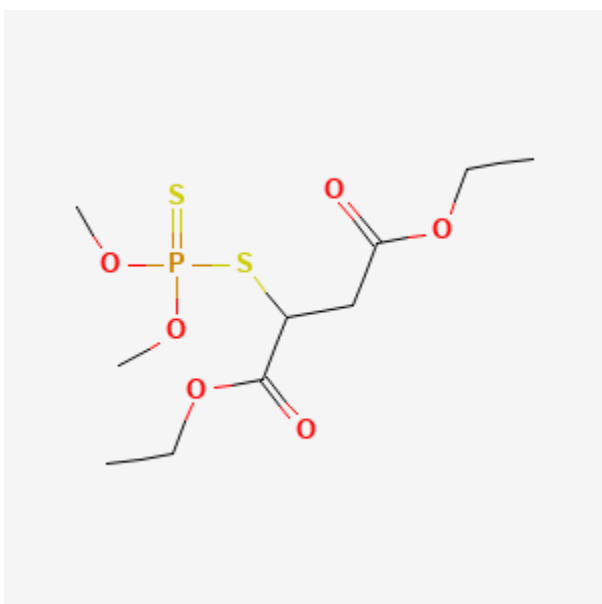




## Malathion

Revised: September 15, 2023.

CASRN: 121-75-5



## Drug Levels and Effects

### Summary of Use during Lactation

Malathion appears to be poorly absorbed after topical application, so it is not likely to reach the breastmilk in large amounts. However, breastmilk excretion of malathion has not been studied after application of the 0.5% lotion. Until more data become available, an alternate agent is preferred.[1]

### Drug Levels

The manufacturer reports that 8% of a topically applied solution of malathion (concentration unspecified) in an acetone vehicle is absorbed through human skin. However, the extent of absorption from commercial 0.5% malathion lotion is not known.

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*Maternal Levels.* Nine breastmilk samples were analyzed from women who lived in an area of California that had been sprayed in 1981 with malathion from 4 to 14 times during their pregnancy and lactation. Malathion was undetectable (<5 mcg/L) in all of the samples. Any exposure of the women would probably have been via inhalation or direct ingestion.[2]

Twelve donors from Bhopal, India provided hindmilk samples to monitor for malathion. The mean malathion level in the samples was 0.043 mg/L (range 0 to 0.086 mg/L). The calculated daily intake by breastfed infants was 40% higher than the World Health Organization recommended average daily intake. The source of malathion was thought to be from contaminated food crops that had been harvested before the recommended waiting time after spraying.[3]

*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

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

## Alternate Drugs to Consider

Ivermectin, Permethrin, Pyrethrins

## References

1. Butler DC, Heller MM, Murase JE. Safety of dermatologic medications in pregnancy and lactation: Part II. Lactation. *J Am Acad Dermatol* 2014;70:417.e1-10.
2. Lönnerdal B, Asquith MT. Malathion not detected in breast milk of women living in aerial spraying areas. *N Engl J Med* 1982;307:439. Letter.
3. Sanghi R, Pillai MK, Jayalekshmi TR, Nair A. Organochlorine and organophosphorus pesticide residues in breast milk from Bhopal, Madhya Pradesh, India. *Hum Exp Toxicol* 2003;22:73-6. PubMed PMID: 12693830.

## Substance Identification

### Substance Name

Malathion

### CAS Registry Number

121-75-5

### Drug Class

Breast Feeding

Lactation

Milk, Human

Anti-Infective Agents

Antiparasitic Agents

Insecticides