

DEET (N,N-ethyl-m-toluamide)

This sheet is about exposure to DEET in pregnancy and while breastfeeding. This information should not take the place of medical care and advice from your healthcare provider.

What is DEET?

DEET (N,N-ethyl-m-toluamide or m-DET) is the active ingredient in many common brands of insect repellent. It is the most effective and well-studied insect repellent ingredient on the market. DEET is particularly effective in preventing mosquito bites and tick attachments. MotherToBaby has a fact sheet on insect repellents at <https://mothertobaby.org/fact-sheets/insect-repellents/>.

Most insect repellents contain 10-25% DEET, but some products contain up to 99% DEET. Products containing higher concentrations of DEET do not provide greater protection; they only last longer. For example, a product with 10% DEET gives approximately 2 hours of protection, while a product with 20% DEET lasts almost 4 hours. Concentrations of 50% or higher do not increase the length of protection.

What is the best way for me to use DEET?

Less than 10% of the DEET applied to the body passes through the skin and enters the bloodstream. When applying DEET to the skin, you can lower your exposure by using the lowest concentration that protects you for the time you will be outdoors. DEET can also be applied to the clothing (long sleeves and pants) rather than the skin.

I just found out I am pregnant. Should I stop using DEET?

The benefits of using DEET during pregnancy may outweigh any possible risks. Using DEET correctly on skin or clothing protects against 90% of mosquito bites and tick attachments. DEET is the most effective protection against mosquitoes and ticks that can carry malaria, Lyme disease, dengue fever, yellow fever, Zika virus and West Nile virus. Any of these diseases during pregnancy can have harmful effects on a developing baby.

Does using DEET increase the chance for miscarriage?

Miscarriage can occur in any pregnancy. Studies have not been done to see if DEET increases the chance for miscarriage.

Does using DEET increase the chance of birth defects?

Every pregnancy starts out with a 3-5% chance of having a birth defect. This is called the background risk. Based on the studies reviewed, exposure to DEET is not expected to increase the chance for birth defects above the background risk. Most studies in pregnant animals have not found an increase in birth defects even with very high levels of DEET exposure.

One human study suggested that hypospadias (a birth defect where the opening of the penis is on the underside rather than the tip) was more common in males who were exposed to insect repellents during early pregnancy. However, the researchers asked study participants about their pregnancy exposures two to six years after the delivery of their children, making the reliability of this study low. There have been case reports describing negative pregnancy outcomes following a person's use of DEET during pregnancy, but these reports do not prove that the DEET exposure caused the negative outcomes.

Does using DEET in pregnancy increase the chance of other pregnancy-related problems?

When used as recommended, DEET is not expected to cause harmful effects when used later in pregnancy. A few studies have looked at the possible effects of pesticides, including DEET, on birth weight in human pregnancy. These researchers tested pesticide levels in umbilical cord blood following the infants' birth. They did not find an association between DEET and lower birth weight.

Does using DEET in pregnancy affect future behavior or learning for the child?

A study of 449 people who used recommended doses of DEET daily during the second and third trimesters of

pregnancy found no increase in problems with the babies' growth or development in the first year of life.

Breastfeeding while using DEET:

The use of DEET during breastfeeding has not been studied. However, the benefits of using DEET may outweigh any possible risks. Illnesses spread by mosquitoes and ticks can have serious health effects on people who are nursing and their children. The same instructions for using DEET during pregnancy can be followed during breastfeeding. Keeping DEET away from the nipple area will help prevent the baby from getting DEET in the mouth while breastfeeding. Talk to your healthcare provider about all of your breastfeeding questions.

If a male uses DEET, could it affect fertility (ability to get partner pregnant) or increase the chance of birth defects?

There is no evidence to suggest that using DEET would cause problems with male fertility or increase the chance of birth defects. A study of 90 males found no association between the quality of the semen and the concentration of components of DEET in their urine. In general, exposures that fathers or sperm donors have are unlikely to increase the risks to a pregnancy. For more information, please see the MotherToBaby fact sheet Paternal Exposures at <https://mothertobaby.org/fact-sheets/paternal-exposures-pregnancy/>.

Please click here for references

Questions? Call 866.626.6847 | Text 855.999.3525 | Email or Chat at [MotherToBaby.org](https://mothertobaby.org).

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