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

The information below will help you determine if your prenatal exposure to DEET will pose an increased risk to your pregnancy. With every pregnancy, all women have a 3 to 5 percent chance to have a baby with a birth defect.

What is DEET?

DEET (N,N-ethyl-m-toluamide or m-DET) is the active ingredient in many common brands of insect repellent. Most insect repellents contain 10-25% DEET in the form of a lotion, spray, or oil that is put directly onto skin or clothing.

DEET has been marketed in the United States since 1956. It is the most effective and well-studied insect repellent on the market, and is particularly effective in preventing mosquito bites and tick attachment.

Is DEET safe to use?

DEET is used by approximately 50-100 million people a year, with very few reports of harmful side effects. There have been reports of significant effects to the central nervous system among individuals who are sensitive to DEET (especially small children) or have been overexposed to DEET; however, most people will not have any adverse effects when they use DEET according to the manufacturers' recommendations.

Products containing higher concentrations of DEET do not provide greater protection, they only last longer. For example, a product with 6.65% DEET would give approximately 2 hours of protection, whereas a product with 20% DEET would last almost 4 hours. Concentrations of 50% or higher do not increase the length of protection. To minimize exposure, an individual should use

the lowest concentration to provide protection for the time they will be outdoors.

Is DEET absorbed into my bloodstream if I'm using it on my skin?

DEET is partially absorbed by the skin, which means that some enters the bloodstream when put directly on the skin. However, less than 10% of DEET applied on the skin enters into the bloodstream. There has been conflicting evidence as to whether DEET crosses the placenta into the baby's circulation. Studies that have shown DEET to cross the placenta suggest that it may cross at very low levels.

Can using DEET during my pregnancy cause birth defects?

Even at toxic levels, there was no increase in birth defects seen in the majority of animal studies. There have been case reports describing adverse pregnancy outcomes following the mother's use of DEET during pregnancy. However, no connection was made between the adverse outcomes and the exposure to DEET. There have been no human studies regarding first trimester exposure to DEET. Based on the animal studies, it appears that exposure to DEET would not significantly increase the risk for birth defects.

Can using DEET later in my pregnancy cause any problems?

There has been a study done in which 497 women used recommended doses

of DEET daily during the second and third trimesters of pregnancy. There was no increase in birth defects or problems with their babies' survival, growth or development in the first year of life. While this report is reassuring, the daily use of DEET during any trimester of pregnancy is generally not recommended.

Should I stop using DEET during my pregnancy?

Application of a 20-30% DEET preparation to the skin or clothing protects against 90% of all mosquito bites and tick attachments. DEET use is therefore the most effective protection against malaria, Lyme disease, dengue fever, yellow fever, and the West Nile virus. Illness caused by any of these diseases during pregnancy can be serious enough to have harmful effects on a developing baby. It is important to consider that the benefits of DEET application during pregnancy may outweigh any possible harm; however, it is wise to limit your exposure as much as possible. If it is not possible to avoid situations where you may be exposed to mosquitoes or ticks, wearing long sleeves and pants, and applying DEET to the clothing rather than skin can help to minimize your exposure.

Can I use DEET while breastfeeding?

There have been no studies of DEET use during breastfeeding. Again, it is important to consider that the benefit of DEET use may outweigh any possible harm, as illness from mosquitoes and ticks can have serious health effects for the nursing mother and infant. Special care should be taken to make sure that the baby does not consume any DEET when breastfeeding.

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