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

This sheet talks about the risks that exposure to DEET can have during pregnancy. With each pregnancy, all women have a 3% to 5% chance of having a baby with a birth defect. This information should not take the place of medical care and advice from your health care provider.

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. Most people will not have any problems when they use DEET according to the manufacturer's 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 she will be outdoors.

Is DEET absorbed into my body 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 body.

Can using DEET during my pregnancy cause birth defects?

Most studies in pregnant animals have not found an increase in birth defects even with very high levels of DEET exposure. There have been case reports describing adverse pregnancy outcomes following the mother's use of DEET during pregnancy. However, these reports do not prove that the DEET exposure caused the adverse outcome. 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?

When used as recommended DEET does not appear to cause harmful effects when used later in pregnancy. There has been a study

of 897 women who 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.

Should I stop using DEET during my pregnancy?

No, it is important to consider that the benefits of DEET application during pregnancy may outweigh any possible harm. 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 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.

If possible, avoid situations where you may be exposed to mosquitoes or ticks. If you are going to be outdoors when mosquitoes or ticks may be present, 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?

Illness from mosquitoes and ticks can have serious health effects for the nursing mother and infant. While there have been no studies of DEET use during breastfeeding, it is important to consider the benefit of using DEET to prevent illness. When applying DEET during breastfeeding follow the same instructions as during pregnancy. Do not apply DEET to the nipple area so the baby cannot get any in his mouth while breastfeeding.

What if the father of the baby uses DEET?

Paternal use of DEET at the time of conception or during a woman's pregnancy is not expected to affect the developing baby.

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If you have questions about the information on this fact sheet or other exposures during pregnancy, call OTIS at 1-866-626-6847.