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Pesticides and Pregnancy

This sheet talks about the risks that exposure to pesticides 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 are pesticides?

A pesticide is a substance used to prevent or destroy insects, fungus, weeds, or other “pests” which can harm crops or people. For example, pesticides are used to reduce the number of mosquitoes, which may carry the West Nile virus and other diseases that can be spread to people. Pesticides sprayed outside with ground equipment or aircraft are referred to as outdoor pesticides. There are many household products that are also considered pesticides, such as cockroach spray, rat poison, or flea collars for pets. These products are known as indoor pesticides.

How can pesticides get into my body?

Pesticides can get into your body by breathing them in, eating them, or getting them on your skin. During the spraying of outdoor pesticides, some of the pesticide may be carried by wind to other areas. Small amounts of outdoor pesticides can also be found in the food and water supply.

What are the most commonly used pesticides?

There are many different kinds of pesticides used in the United States. Some of the most commonly used pesticides are organophosphate pesticides (examples are malathion and naled) and pyrethrin and pyrethroid pesticides (example: Anvil®). After Hurricane Katrina, naled and Anvil® were

sprayed over much of the Gulf region to control flies and mosquitoes.

Will exposure to pesticides increase the risk to my pregnancy?

Most animal studies with malathion, naled, pyrethrins, and pyrethroids have not shown an increased risk for birth defects. Low birth weight and higher rates of fetal loss were seen at doses that were poisonous to the mother animal.

Two human studies looked at pregnancy outcomes following the repeated spraying of malathion. These studies did not find a consistent increase in birth defects, and there was no effect on birth weight or miscarriage rates. These studies are limited because although malathion was sprayed in the community, the amount of exposure to each individual is not known. There are no human studies with the outdoor use of naled, pyrethrins, and pyrethroids. However, a study of 113 women using a pyrethroid cream to treat head lice did not show an increased risk for birth defects or pregnancy complications.

Some human studies have associated pesticide exposure during pregnancy with an increased risk of childhood cancer. These studies are limited because the actual amount of pesticide each individual was exposed to is unknown. Other studies have not shown that childhood cancer is related to pesticide exposure. At this point, there is not enough information to determine if exposure to

pesticides during pregnancy increases the risk of childhood cancer.

How can I minimize my exposure to pesticides?

The amount of pesticide is important in deciding whether a pregnancy is at an increased risk. In animal studies, pesticides have generally not been associated with birth defects or pregnancy complications unless the amount of pesticide was high enough to be poisonous to the mother animal. This suggests that direct exposure to pesticides (from mixing and applying them yourself) may pose more risk to a pregnancy than low-level or indirect exposures. As with all chemicals, exposure can be minimized by working in a well ventilated area and using protective equipment. It is unlikely that having your home or workplace treated by a professional exterminator will result in a high enough exposure to increase the risk to a pregnancy.

What if I am exposed to pesticides while breastfeeding?

Pesticides can be found in breast milk, but studies on the effects of these pesticides have not been done. When the milk from nine breastfeeding women living in an area repeatedly sprayed with malathion was tested, no malathion was detected in any of the milk samples. The nutritional and psychological benefits of breastfeeding may outweigh the risk of exposure from pesticides sprayed in your home, workplace, or community.

What if my partner is exposed to pesticides at home or at work?

There are adult safety levels for pesticide exposure that should be followed in the workplace. In animal studies, high doses of malathion reduced male fertility. On the other hand, one human study compared men with high and low sperm counts and did not find a

difference in the amounts of a malathion breakdown product in their bodies. In general, environmental exposures in men have not been associated with birth defects in offspring, although further studies are needed.

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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.