

Pregnancy & Pesticides: Is there any concern?

Exposure to pesticides is a concern for adults, children and particularly expectant mothers. Garden insects, fleas, mosquitoes, ants and cockroaches are just some of the reasons that people commonly use pesticides around their home. Pesticides and insecticides contain chemicals that are used to attack the nervous system of the insects and cause them to die.

Pesticide exposure can be risky at all ages and shouldn't be taken lightly but is there any more increased risk with being pregnant? The overall answer is yes, there is always some level of risk. Any exposure could cause harm if the risk (exposure x toxicity) is high enough. However, it must be said that there is not enough studies done to conclude one way or the other whether pesticides do or do not cause harm to an unborn fetus. All the studies show is that there could be a potential risk; a risk that every human faces in life not just those who are pregnant. The take away message is that you just need to be **smart** and use common sense. During the first trimester of pregnancy, the nervous system is rapidly developing in your baby, so you definitely want to avoid any type of contact with pesticides during this time.

What is considered a pesticide?

A pesticide is an agent that is designed to kill/treat pests. It is because of the chemical make up of the product that exposes some potential risk to the person who uses it. Pesticides can be used indoors and outdoors and have a myriad of applications.

Common Pesticides:

- Insect sprays (indoor use)
- Insect repellents for personal use
- Flea and tick sprays/ointments
- Product to kill mold/mildew
- Lawn and garden products (weed killers)
- Swimming pool chemicals
- Kitchen, laundry and bath disinfectants (bleach)

How can one be exposed?

1. Inhalation exposure
2. Dermal exposure (absorbed through the skin)
3. Oral exposure (ingested)

Are pesticides or insecticides safe during pregnancy?

The safest rule of thumb is that pregnant women should avoid pesticides whenever possible. Most studies indicate that the greatest risk of exposure to pesticides is during the first three to eight weeks of the first trimester when the neural tube development is occurring. The California Birth Defects Monitoring Program reports that three out of every four women are exposed to pesticides around the home. They also observed that pregnant women exposed to household gardening pesticides had a modest risk increase for oral clefts, neural tube defects, heart defects, and limb defects. Women living within 1/4 mile of agricultural crops had the same modest risk increase for neural tube defects. Pregnant women living near an agricultural area where pesticides are being used, are advised to remove themselves to avoid exposure to these chemicals.

Some journals like the *Annals of Oncology*, *Epidemiology, Toxicology and Applied Pharmacology*, *Journal of Neuroscience*, *Occupational Environmental Medicine*, and the *American Journal of Public Health* have reported associations between agricultural pesticides and birth defects, pregnancy complications, and miscarriages. The *Environmental Health Perspectives Journal* reports that children who are exposed to indoor pesticides are at an elevated risk of leukemia and that the risk is increased during the first three months of pregnancy and when professional pest control services are used in the home.

What is IPM?

IPM stands for Integrated Pest Management which is a growing technique for controlling pests by a more organic measure. The EPA states, "In IPM, information about pests and available pest control methods is used to manage pest damage by the most economical means and with the least possible hazard to people, property and the environment." This technique should be use going forward and not only if you're pregnant.

But are organic or natural pesticides safe during pregnancy?

Although they sound healthier, the organic and natural are not synonymous with *better* or *safer*. Almost all toxins used in pesticides are compounds that are naturally present in plants. All chemicals, including natural chemicals, have the potential to cause harm if they are not properly handled.

What are some common steps to take if the use of pesticide is needed?

1. Make sure to choose the right pesticide for the job needed (outdoor, indoor, home, garden, etc)
2. **ALWAYS** read the label and look out for signal words (i.e. Caution, Warning or Danger).
3. Determine how much pesticide is needed. Do not buy more than is needed.
4. Use the product as it is intended.
5. Ensure that pesticides are stored or disposed of properly.
6. If using the product indoors make sure to leave enough time to air out the house

Helpful Information on Pesticide or Insecticide Use During Pregnancy:

- The safest thing to do is to avoid using pesticides or insecticides in the home, on pets, or the garden during pregnancy, particularly avoiding them during the first trimester
- It is advice to not panic if exposure to pesticides during pregnancy occurred. Any real risk comes from long-term or intense exposure.
- If it is necessary to have pesticides applied to the home, pet, or garden of a pregnant woman, the following guidelines might help decrease the likelihood of exposure:
 - Have someone else apply the pesticides
 - Leave the area for the amount of time indicated on the pesticide package
 - Remove food, dishes, and utensils from the area before the pesticide is used
 - Wash the area where food is normally prepared following any application of pesticides in the home
 - Open the windows and allow the house to ventilate after the treatment is completed
 - Wear protective clothing to prevent contact with areas that have pesticide on them
 - Call poison center at (800) 222-1222 immediately if a pesticide comes in contact with skin, is inhaled, or is swallowed. Try to have the pesticide container with when calling.

For more information regarding pesticides and the potential risks please visit the following sites:

1. www.epa.gov/pesticides
2. <http://npic.orst.edu/>
3. <http://npic.orst.edu/health/preg.html>
4. http://www.epa.gov/oppfead1/Publications/Cit_Guide/

References:

1. *Assessing health risks from pesticides*. (2007, April 5). Retrieved from <http://epa.gov/pesticides/factsheets/riskassess.html>
2. *Human health issues*. (2011, April 6). Retrieved from <http://www.epa.gov/pesticides/health/human.html>
3. *Pesticides and pregnancy*. (2011, February 24). Retrieved from <http://npic.orst.edu/health/preg.html>
4. U.S. Environmental Protection Agency, (2005). *Citizen's guide to pest control and pesticide safety* (EPA 735-K-04-002)