

Pesticides

This sheet is about exposure to pesticides in pregnancy and while breastfeeding. This information is based on available published literature. It should not take the place of medical care and advice from your healthcare provider.

What are pesticides?

Pesticides are substances used to prevent or destroy “pests” such as weeds, insects, animals (rodents and other), fungus and parasites that can harm crops or people. For example, pesticides are used to lower the number of mosquitoes which may carry the Zika virus or parasites that cause diseases (like malaria) that can be spread to people. Pesticides used to kill weeds are called herbicides. Pesticides used to kill or prevent the growth of fungi and their spores are called fungicides.

Pesticides sprayed outside with ground equipment or by aircraft are called 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.

This sheet talks in general about pesticides. Please contact MotherToBaby to see if there is more information on a specific product or ingredient that you have questions about. When calling, have a copy of the label nearby so that you can list the ingredients.

How can pesticides get into my body?

Pesticides can get into the body in several ways, such as breathing them in (inhalation), eating foods that were sprayed with pesticides (ingestion), or absorbing them through your skin. When outdoor pesticides are being sprayed, wind can carry some of the pesticide to other areas. Small amounts of outdoor pesticides can also be found in the food and water supply.

What are some commonly used pesticides?

There are many different kinds of pesticides used in the United States. Some commonly used pesticides are glyphosate (Round Up®), organochlorines pesticides (DDT, dieldrin, lindane), organophosphate pesticides (examples are malathion and naled) and pyrethrin and pyrethroid pesticides (example: Anvil®, Raid®).

Will exposure to pesticides harm my pregnancy?

Every pregnancy starts out with a 3-5% chance of having a birth defect. This is called the background risk. Most animal studies with glyphosate, organophosphates, organochlorines, pyrethrins, or pyrethroid exposure have not shown an increased chance for birth defects above the background risk. Low birth weight and higher rates of fetal loss were seen at doses that were poisonous to the pregnant animal.

Two human studies looked at pregnancy outcomes following the repeated spraying of malathion, and another study looked at several different pesticides. These studies did not find a consistent increase in birth defects above the background risk. Also, there were no reported effects on birth weight or the rates of gestational diabetes or miscarriage. Another study found a higher chance for preterm delivery (birth before week 37) in counties of California that used higher levels of pesticides when compared to counties with lower pesticide use. These studies are limited because although pesticides were used in the community, the amount of exposure to each woman is typically not known. A study of 113 women using a pyrethroid cream to treat head lice during pregnancy did not show an increased chance for birth defects or pregnancy complications.

How can I minimize my exposure to pesticides?

For all pesticides, it is important to carefully follow the recommendations for use. If possible, avoid mixing and applying pesticides yourself. If that is not possible, exposure can be minimized by working in a well-ventilated area and using protective equipment such as a respirator, long sleeves, long pants, and gloves. Always follow handling and storage instructions on the pesticide label. It is unlikely that having your home or workplace treated by a professional exterminator will result in a high enough exposure to increase risks to a pregnancy. To reduce exposure to pesticides found on food, wash produce and your hands well before eating.

Breastfeeding and pesticides:

Studies have not been done to look at the effects of pesticides while breastfeeding. The benefits of breastfeeding may outweigh the risk of exposure from pesticides sprayed in your home, workplace, or community. Be sure to talk to your healthcare provider about all your breastfeeding questions.

If a man is exposed to pesticides at home or at work, could it affect fertility (ability to get a woman pregnant) or increase the chance of birth defects?

There are adult safety levels for pesticide exposure that should be followed in the workplace. In animal studies, high doses of malathion reduced a man's fertility. A study of 152 farmers found the 62 men who had been exposed to either paraquat or malathion or both in various amounts had lower sperm count and motility than those not exposed. Another 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, exposures that men 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).

Disclaimer: MotherToBaby Fact Sheets are meant for general information purposes and should not replace the advice of your health care provider. MotherToBaby is a service of the non-profit Organization of Teratology Information Specialists (OTIS). Copyright by OTIS, July 1, 2023.