

Fact Sheet

Pyrethroids are manufactured chemicals that are similar to pyrethrins (naturally occurring mixture of chemicals found in certain chrysanthemum flowers that have insecticidal properties) but are often more toxic to insect and mammals and last longer in the environment than pyrethrins. More than 1,000 synthetic pyrethroids have been developed, but less than 12 are used in the United States. Pyrethrins and pyrethroids are often combined commercially with other chemicals called synergists, which enhance the insecticidal properties of the chemicals. Synergists prevent some enzymes from breaking down, thus increasing their toxicity. Pyrethrins and pyrethroids are primarily released in the air because of their use as insecticides. Humans can be exposed in several ways. Eating foods contaminated with pyrethroids is the most common way. Humans can be exposed after insecticide has been sprayed through inhalation and dermal (skin) exposure. Pyrethroids are also found in common household products such as lice treatments, scabies treatment, pet sprays and shampoos and mosquito repellants.

Possible Health Concerns from Exposures:

Pyrethrins and pyrethroids interfere with the way the nerves and brain function. Large amounts of pyrethrins or pyrethroids on your skin may cause numbness, itching, burning, stinging, tingling or warmth. You are not likely to be exposed to large enough doses for the chemicals to enter your body and cause other problems. However, if very large amounts of chemicals were to enter your body, you might experience dizziness, headache, nausea, muscle twitching, reduced energy and changes in awareness. Even larger amounts could cause convulsions and loss of consciousness. Some people are allergic to pyrethroids and pyrethrins. Animal studies suggest pyrethrins and pyrethroids might be capable of causing cancer in people. Children exposed to large amounts of pyrethrins or pyrethroids would be expected to be affected in the same way as adults. There is no evidence in humans that these chemicals cause birth defects.

Actions to Lower Exposure:

- Discuss with your doctor or health department if you or your children have been exposed to significant amounts of pyrethrins or pyrethroids.
- If you use products containing pyrethrins and pyrethroids carefully follow instruction on how to apply them properly and how long to wait before re-entering the treated area. Do not apply more than the recommended amount. These products should be stored out of reach of children to prevent accidental poisoning.
- Contact the poison control center or see a doctor if you feel sick after a pesticide has been used in your home. If you or a neighbor is applying pyrethrins or pyrethroids stay indoors with your children and pets and close your windows.
- Wash fruits and vegetables before eating them and trim the fat from meat and poultry because pesticides often concentrate in fat.
- Discourage your children from eating dirt and make sure they wash their hands frequently before eating.

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