



Effects of Pesticides of Humans

Organic Garden Pvt. Ltd

What is Pesticides?

- If it has the suffix –cide in it, then you know it's about killing something. Pesticides are designed to kill insects, fungus, bacteria and other things that feed on crops, are vectors for disease, nuisances, and things that destroy property. Farming is big business. And some of the farming companies are bottom–line entities in business to make money at any cost. Pesticides and genetically modified organisms are how they insure that they will get the crop yield they demand every season, no matter how it hurts the environment or the consumers.
- Two types of pesticides are biological and chemical. Biological pesticides can be developed using fungi, bacteria and other organically present substances. Some biological pesticides are microorganisms that, without any manipulation, demonstrate natural effectiveness in targeted pest control. These generally aren't toxic to humans or animals and don't leave a persistent residue.



What is Pesticides?

- The greatest risk to our environment and our health comes from the chemical pesticides. In spite of the dangers, the government maintains its approval of the use of toxic chemicals to make pesticides. And science is constantly developing variations of poisons.
- Two classes are broad-spectrum and narrow-spectrum pesticides. **Broad-spectrum pesticides** kill many kinds of pests, while narrow-spectrum pesticides do just the opposite. **Narrow-spectrum pesticides** are developed to kill specific organism types. Examples are algicides for algal, avicides for birds, fungicides for fungi and oomycetes (also called water molds, they use surface water including precipitation on plants, to move around). Most pesticides kill pests directly on contact. **Systemic pesticides** work differently. They penetrate to the inside of a plant traveling along its absorption path.
- These poisons work by poisoning the pollen and nectar of flowers and this can kill needed pollinators like butterflies and bees.



Shocking Facts

- Pesticides are a major threat to bees. The systemic poisoning of flowers has killed scores of bees.
- We're simply losing too many of them. The bees and butterflies among others are pollinators and they represent a natural tour de force in perpetuating plant cycles and evolution.
- You see, they do cross pollination naturally. More than 25% of the bee colonies died in winter 2006/07. That translates to a loss of tens of billions of bees.
- And it's estimated that this loss will negatively impact the agricultural economy to the tune of \$8 to \$12 billion.



Who's at Risk for Exposure to Pesticides?

- Farmers and their families and other persons who use chemical pesticides regularly are at greatest risk for achieving toxic levels in their bodies. The danger is spread out to larger areas, as the pesticides:
 - Are carried on the wind
 - Leave residues on produce
 - Remain inside produce and animals
 - Run off into open water, contaminating public water supply as well as fish and other seafood
- Anyone who uses pesticides or is present when pesticides are sprayed is at risk for dangerous exposure. The pesticides can enter the body through skin, eyes, mouth and nose.



What are the Dangers from Pesticides Exposure?

- Pesticides can be toxic to humans and lower animals. It can take a small amount of some toxins to kill. And other toxins that are slower acting, may take a long time to cause harm to the human body.
- Pesticide production can be dangerous, too. One disaster at a pesticide manufacturing plant was in Bhopal, India. The plant accidentally released 40 tons of an intermediate chemical gas, methyl isocyanate, used to produce some pesticides. In that disaster, nearly 3,000 people were killed immediately, overall approximately 15,000 deaths occurred. Today nearly 100,000 people suffer from mild to severe permanent damage as a result of that disaster.¹
- In China, it's estimated that 500,000 people suffer pesticide poisoning annually, and some 500 of them die.²
- Children seem to be greatly susceptible to the toxic effects of pesticides. The Natural Resource Defense Council has collected data which recorded higher incidence of childhood leukemia, brain cancer and birth defects. These results correlated with early exposure to pesticides.³



Doctor Group's Comment:

“Neurotoxins are any substances that can cause disruption to the neurological system including the brain. Many neurotoxins are organophosphates, and several are currently approved and being used to make pesticides.”



What are the Dangers from Pesticides Exposure?

- Even just using pesticides in amounts within regulation, studies have revealed neurotoxins can do serious damage during development. Researchers report the dangers of pesticides can start as early as fetal stages of life. The *Pesticides* entry at Wikipedia.org lists some of the results that have been recorded in recent years including:
- Fetuses, (pre-birth babies), may suffer from exposure and exhibit behavioral problems, growth issues
- Lower cognitive scores, fewer nerve cells and lower birth weight
- A lower resistance to the toxic effects of pesticides
- A greater risk (70% increase), for Parkinson's disease, even with low levels of pesticides
- Can you believe the government approved the use of some organophosphates despite the occurrence of illnesses? It makes you wonder just who the Environmental Protection Agency (EPA) is working to protect.



What are the Dangers from Pesticides Exposure?

- What you also need to understand is that toxins from pesticides can remain in the body and build up in the liver. And, even at "safe" levels your reactions can be mild to severe. High levels of exposure can be fatal.
- How do you know if you're going to be ill? You don't; you just have to hope for the best.
- How will you be affected? Well, you don't really know how your body will react to the toxins until it happens. Several factors determine how your body will react including your level of exposure, the type of chemical you ingest, and your individual resistance to the chemicals. Some people are unaffected or are mildly affected, while others become severely ill from similar levels of exposure.



What are the Dangers from Pesticides Exposure?

- Some possible reactions are:
 - Fatigue
 - Fatigue
 - Skin Irritations
 - Nausea
 - Vomiting
 - Breathing Problems
 - Brain Disorders
 - Blood Disorders
 - Liver & Kidney Damage
 - Reproductive Damage
 - Cancer
 - Death



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