

The Negative Effects of Chemical Pesticides and their Consequences on Public Health and the Environment

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Pesticides are being used in agricultural production in a variety of ways. Chemical pesticides are well-known for polluting the environment and causing serious health problems. Unfortunately, when pesticides are applied on a surface, they migrate by air, soil, or water outside of their intended area of usage. This is one of the most common ways that chemical pesticides cause collateral damage outside of their intended use, resulting in air and water pollution, soil contamination, and the extinction of beneficial insects, all of which have negative consequences for biodiversity. On the other side, when farmers around the world began to rely on chemical pesticides, soil health began to deteriorate dramatically. When the soil's health is jeopardized, the nutritional value of the food it produces is jeopardized as well. Chemical pesticides not only rob our food of its nutritious worth, but also pollute it. Pesticide residues have been repeatedly identified in food, despite the fact that pesticides are designed to kill live things and are not intended to enter our bodies. Because of the accumulation of residues in the tissues following cattle dipping or vector control, or when they feed on pesticide-contaminated feedstuffs, meat may have significant levels of pesticide residues. Because these substances are hazardous for living species, their greater accumulation in the food chain could endanger the general public's health. Chemical pesticides have also been linked to a variety of disorders, including heart disease, cancer, Alzheimer's disease, and Parkinson's disease, according to many studies. Other health impacts include asthma, allergies, and hypersensitivity, and pesticide exposure has also been related to cancer, hormone, and reproduction and fetal development issues. Chlorinated organic compound pesticide contamination can have serious health repercussions. They've been linked to a variety of malignancies, particularly those of the reproductive system, as well as immune system depression, birth abnormalities, sterility, and neurobehavioral issues. Pesticides in food have recently been a major source of serious public health concerns, as they can cause acute or chronic liver toxicity in humans. A pesticide's toxicity is a measurement of its ability to cause injury or illness. Understanding the differences in pesticide toxicity levels allows a user to reduce the risk of harm by choosing the pesticide with the lowest toxicity that will control the pests. When it comes to pesticides, there are two forms of toxicity: The acute toxicity of a pesticide refers to the chemical's ability to cause injury to a person or animal after a single, usually brief exposure, as reported by the Pesticide Safety Education Program (PSEP). Acute impacts are the adverse effects that arise as a result of a single exposure through any route of entry. Dermal, inhalation, oral, and ocular exposure are the four modes of exposure. The cutaneous toxicity, inhalation toxicity, and oral toxicity of test animals are used to determine acute toxicity. Irritation of the eyes and skin is also investigated. The other type of toxicity with pesticides is chronic toxicity, which can be measured by exposing test animals to the active component for an extended period of time. Chronic impacts are any adverse consequences that arise as a result of tiny doses repeated over time. Birth defects, fetal toxicity, the formation of benign or malignant tumors, genetic alterations, blood problems, nerve disorders, endocrine disruption, and reproduction consequences are all suspected chronic effects of pesticide exposure. A pesticide's chronic toxicity is more difficult to assess through laboratory study than its acute toxicity. From this, we may deduce the magnitude of chemical pesticides' bad impacts on the environment in general and public health, in particular, this, which may prompt us to reconsider various behaviors that would lessen the negative impact on the environment and public health as much as feasible. As a result, in this approach, we must always seek out methods that have a lower impact on public health and are more environmentally friendly.

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