

# Poisonous Effects of Insect Sprays in the Home and School

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**Y**OU may all be wondering what in the world the poisonous effects of insect sprays have to do with nutrition. Anything which interferes with the utilization of the absorption of foods or nutriment is definitely influencing nutrition and has a marked and important relationship to the subject. We are convinced that certain insect sprays which are widely used are doing just this.

Up until 1945 we used many old sprays such as nicotine, arsenic, lead, arsenate, etc. on our plants and crops in an attempt to protect them from insect enemies and to increase our food supply. In 1945 there was developed a group of chemicals which I am going to discuss, namely the chlorinated hydrocarbons, of which DDT is one of the outstanding compounds. This has unusual capacity of being almost insoluble in water and therefore its effects last a long time. One plot of ground that was sprayed from DDT eight years ago still contains 30-40 per cent of the original quantity applied to it, so we can understand that this chemical is only slowly broken down. We are using DDT, dieldrin-methoxychlor and others on most of our food crops these days. Residues persist on many of our foods after they are marketed. They cannot be removed by washing; they cannot be removed by scrubbing with soap and water; nor can they be removed by soaking in dilute hydrochloric acid which used to be sufficient to remove arsenic and the older sprays.

As a result many of us are accumulating in our body tissues, particularly in the fatty tissues, certain amounts of DDT and other hydro-chlorinated carbons. And the tendency in some people, who have poor detoxicating ability or let us say defenses which are not as good as others, is to accumulate an increasing quantity of these chemicals. Some of us have seen symptoms of illness in people who have contacted these sprays directly when

using them in the home, usually upon repeated contact, but occasionally on the first or second exposure. We have seen symptoms which are exactly the same (as those noted in) virus infections which we have had year after year and with increasing frequency. Probably most of you this winter have had attacks of nausea, vomiting and diarrhea; or sore throats, headaches, coughs, dizziness, extreme fatigue, muscular aches and pains and neuralgic pains to mention a few of the symptoms. All of these can be reproduced by contact with DDT or Chlordane in sensitive or hypersensitive people.

One of the things these chemicals do is to produce liver damage, if they are present in the tissues in adequate amounts. We know that when a rat is given enough DDT so that five parts per million accumulates in the fat, if a slice of that animal's liver is put under a microscope definite evidence of damage to the liver cells will be visible. We do not know whether that applies to humans who have 5 p.p.m. in their fat or not, but it has been admitted recently that practically all individuals in this country ingest DDT and other chlorinated hydrocarbons in their food each day, and that it is almost impossible to get a meal that is free from DDT.

Now if these sprays are used in the home for the control of ants, flies, and mosquitoes, and also in public buildings such as our schools, we are exposed to an unnecessary extra hazard in addition to the residues that we get in our food.

In all fairness I must say that routine tests are made of the foods in the wholesale markets in an attempt to protect the public from excess residues, and any groups found over the tolerance limits are removed from the market. In spite of this there is a small permissible residue on many foods so that it may build up in the tissues. Therefore it behooves

us not to use these sprays in public buildings or in the home since such exposure only adds to load which we are carrying.

As a concrete example of what can be done, the school physician of Santa

Barbara was recently far-sighted enough to remove DDT and Chlordane from the school catalogue so that these dangerous chemicals are no longer available to any of the school personnel.