

**Cases Reported in California¹ with Documented² Pesticide Exposure
Summarized by the Type of Illness and the Type of Pesticides
2009**

Type of Illness ³	Antimicrobials ⁴		Cholinesterase Inhibitors ⁴		Other Pesticides ⁴		Total
	Occupational ⁵	Non-Occupational ⁵	Occupational ⁵	Non-Occupational ⁵	Occupational ⁵	Non-Occupational ⁵	
Systemic							
Systemic with Respiratory and Topical Effects	15	3	8	3	41	9	79
Systemic with Respiratory Effects	31	21	5	5	39	40	143
Systemic with Topical Effects	7	5	4	0	20	9	45
Systemic Only	13	20	15	4	35	66	158
Respiratory							
Respiratory with Topical Effects	9	2	2	2	24	13	52
Respiratory Only	39	38	0	3	23	23	127
Topical							
Eye Only	126	10	0	2	38	27	207
Skin Only	37	1	3	0	24	10	77
Eye and Skin	18	1	0	0	5	6	30
Asymptomatic							
Asymptomatic	3	0	5	0	40	6	54
TOTAL	298	101	42	19	289	209	972

¹ Source: California Department of Pesticide Regulation, Pesticide Illness Surveillance Program.

² **Documented Pesticide Exposure:** Includes cases classified as definitely, probably, or possibly related to pesticide exposure as well as documented pesticide exposure that did not result in symptomatology.

Definite : High degree of correlation between pattern of exposure and resulting symptomatology. Requires both medical evidence (such as measured cholinesterase inhibition, positive allergy tests, characteristic signs observed by medical professional) and physical evidence of exposure (environmental and/or biological samples, exposure history) to support the conclusions.

Probable : Relatively high degree of correlation exists between the pattern of exposure and the resulting symptomatology. Either medical or physical evidence is inconclusive or unavailable.

Possible : Health effects correspond generally to the reported exposure, but evidence is not available to support a relationship.

³ **Type of Illness:** Categorization of the type of symptoms experienced.

Systemic : Any health effects not limited to the respiratory, skin and/or eye. Cases involving multiple illness symptom types including systemic symptoms are included in the systemic category.

Respiratory : Health effects involving any part of the respiratory tree.

Topical : Health effects involving only the eyes and/or skin. This excludes outward physical signs (miosis and lacrimation) related to effects on internal bodily systems. These signs are classified under 'Systemic.'

Asymptomatic : Exposure occurred, but did not result in illness/injury. Cholinesterase depression without symptoms falls in this category.

⁴ **Type of Pesticide:** Type of pesticide based on functional class.

Antimicrobials : Pesticides used to kill or inactivate microbiological organisms (bacteria, viruses, etc.).

Cholinesterase Inhibitors : Pesticides known to inhibit the function of the cholinesterase enzyme.

Other Pesticides : Any pesticide that is not an antimicrobial or cholinesterase-inhibiting pesticide.

⁵ **Occupational or Non-Occupational:** The relationship between the illness/injury and the individual's work

Occupational : Work related. The individual was on the job at the time of the incident. This includes both paid employees and volunteers working in similar capacity to paid employees.

Non-Occupational : Not work related. The individual was not on the job at the time of the incident. This category includes individuals on the way to or from work (before the start or after the end of their workday).

Whom to Contact:

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About the Pesticide Illness Surveillance Program Data

Pesticide-related illnesses have been tracked within the state of California for more than 50 years. The California Environmental Protection Agency, Department of Pesticide Regulation (DPR) maintains a surveillance program which records human health effects of pesticide exposure. The Pesticide Illness Surveillance Program (PISP) documents information on adverse effects from pesticide products, whether elicited by the active ingredients, inert ingredients, impurities, or breakdown products. This program maintains a database, which is utilized for evaluating the circumstances of pesticide exposures resulting in illness. This database is consulted regularly by staff who evaluate(s) the effectiveness of the DPR pesticide safety programs and recommend changes when appropriate.