

**Illnesses and Injuries Reported by California Physicians<sup>1</sup> Associated With<sup>2</sup>  
Pesticide Exposure Summarized by Pesticide(s) and Type of Illness  
2002**

Pesticide <sup>3</sup>	Systemic/ Respiratory <sup>4</sup>		Topical <sup>4</sup>		TOTAL	
	Definite/ Probable	Possible	Definite/ Probable	Possible	Definite/ Probable	Possible
<b>Organophosphates</b>						
Acephate	1	0	0	0	1	0
Chlorpyrifos	17	2	1	1	18	3
DDVP	22	2	0	0	22	2
Demeton	1	0	0	0	1	0
Diazinon	13	6	4	1	17	7
Malathion	5	4	1	0	6	4
Naled	0	1	0	0	0	1
Phosmet	0	1	0	0	0	1
Trichlorfon	0	1	0	0	0	1
<b>N-Methyl Carbamates</b>						
Aldicarb	0	1	0	0	0	1
Carbaryl	1	0	0	1	1	1
Methomyl	1	0	0	0	1	0
Propoxur	2	0	0	0	2	0
<b>Pyrethrins and Pyrethroids</b>						
Bifenthrin	2	1	1	0	3	1
Cyfluthrin	4	2	3	2	7	4
Cyhalothrin	0	0	1	0	1	0
Cypermethrin	4	1	1	0	5	1
Deltamethrin	0	1	0	0	0	1
Esfenvalerate	3	1	2	0	5	1
Permethrin	6	1	0	0	6	1
Pyrethrins	0	1	0	0	0	1
Tralomethrin	2	0	1	0	3	0
<b>Organochlorines</b>						
Endosulfan	0	0	1	0	1	0
<b>Other Pesticides</b>						
2,4-D	0	1	0	0	0	1
Abamectin	0	1	0	0	0	1
Adjuvant	0	0	1	0	1	0
Aluminum Phosphide	1	1	0	0	1	1
Arsenic Trioxide	1	0	0	0	1	0
Borax	1	0	1	0	2	0

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Pesticide <sup>3</sup>	Systemic/ Respiratory <sup>4</sup>		Topical <sup>4</sup>		TOTAL	
	Definite/ Probable	Possible	Definite/ Probable	Possible	Definite/ Probable	Possible
Boric Acid	0	1	0	0	0	1
Brodifacoum	2	0	0	0	2	0
Bt (Berliner) Aizawai Serotype H-7	0	0	0	1	0	1
Bt (Berliner) Kurstaki Serotype 3a, 3b	0	0	0	1	0	1
Calcium Hypochlorite	3	2	2	0	5	2
Captan	0	3	0	2	0	5
Chlorine	9	0	0	0	9	0
Chlorothalonil	0	0	5	0	5	0
Copper Hydroxide	0	1	0	0	0	1
Copper Naphthenate	3	1	0	0	3	1
Creosote	0	0	0	2	0	2
Cyanuric Acid	13	1	6	0	19	1
D-Limonene	1	0	0	0	1	0
Deet	1	0	2	0	3	0
Diquat	1	0	0	0	1	0
Eptc	0	0	1	0	1	0
Ethalfuralin	0	0	1	0	1	0
Fenbutatin-Oxide	0	0	1	0	1	0
Gibberellic Acid	0	10	0	1	0	11
Glutaraldehyde	9	1	7	1	16	2
Glyphosate	4	8	5	2	9	10
Halogenated Hydantoins	1	0	0	0	1	0
Hexazinone	0	1	0	0	0	1
Hydrogen Chloride	1	0	2	0	3	0
Imidacloprid	0	1	1	0	1	1
Lime-sulfur	0	1	2	0	2	1
Lithium Hypochlorite	0	0	1	0	1	0
MSMA	1	0	0	0	1	0
Mancozeb	0	1	0	0	0	1
Metaldehyde	1	0	0	0	1	0
Metam-Sodium	147	4	232	1	379	5
Methyl Bromide	1	1	1	0	2	1
Myclobutanil	0	0	0	1	0	1
None	0	1	0	0	0	1
Oxyfluorfen	0	0	1	0	1	0
Ozone	0	0	1	0	1	0
Paraquat	0	0	2	1	2	1
Peroxyacetic Acid	0	0	3	0	3	0

Pesticide <sup>3</sup>	Systemic/ Respiratory <sup>4</sup>		Topical <sup>4</sup>		TOTAL	
	Definite/ Probable	Possible	Definite/ Probable	Possible	Definite/ Probable	Possible
Phenolic Disinfectants	0	0	5	0	5	0
Pine Oil	6	1	2	0	8	1
Potassium Peroxymonosulfate	0	0	1	0	1	0
Propargite	0	0	1	0	1	0
Quaternary Ammonia	6	3	26	4	32	7
Sethoxydim	0	1	1	0	1	1
Sodium Chlorite	1	1	0	0	1	1
Sodium Hypochlorite	58	9	60	5	118	14
Strychnine	1	0	0	0	1	0
Sulfur	0	2	3	4	3	6
Sulfur Dioxide	0	1	0	2	0	3
Sulfuryl Fluoride	1	8	0	0	1	8
Thiram	0	0	0	1	0	1
Trichloromelamine	0	0	1	0	1	0
Trifluralin	1	1	1	0	2	1
Trinexapac-Ethyl	1	0	0	0	1	0
Ziram	0	0	1	0	1	0
Combinations of Antimicrobials	68	3	10	4	78	7
Combinations of Fumigants	4	23	0	0	4	23
Combinations of Fungicides	5	0	1	4	6	4
Combinations of Herbicides	11	9	2	4	13	13
Combinations of Insecticides Including ChE Inhibitor(s)	14	2	1	2	15	4
Combinations of Insecticides Without ChE Inhibitor(s)	39	26	4	1	43	27
Miscellaneous Combinations	57	64	15	8	72	72
Unknown Antimicrobials	7	1	5	4	12	5
Unknown Fungicides	0	0	0	1	0	1
Unknown Herbicides	2	0	0	0	2	0
Unknown Insecticides	18	4	5	1	23	5
Unknown Pesticides	1	1	0	1	1	2
<b>TOTAL</b>	<b>586</b>	<b>227</b>	<b>439</b>	<b>64</b>	<b>1025</b>	<b>291</b>

<sup>1</sup> **Source:** California Department of Pesticide Regulation, Pesticide Illness Surveillance Program.

<sup>2</sup> **Associated With:** Includes cases classified as definitely, probably or possibly related to pesticide exposure

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 : Some degree of correlation evident. Medical and physical evidence are inconclusive or unavailable.

<sup>3</sup> **Type of Pesticide:** Pesticides listed on this table are grouped according to frequent inquiries received by DPR. Other pesticides are then listed in alphabetical order.

<sup>4</sup> **Type of Illness:** Categorization of the type of symptoms experienced.

Systemic : Any health effects not limited to the 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.'

#### **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.