

Chlordane Contamination — Continued

dane toxicity, and neither chlordane nor its metabolites were found in serum of persons who had ingested affected water. Rather than to chlordane, reported symptoms could be attributable to superficial effects of kerosene hydrocarbons that dominated the impurities found in water samples.

Chlordane is difficult to remove from water-distribution systems because it adheres to lining surfaces or it deposits in tanks and lines and rediffuses slowly into adjacent water. However, prolonged and vigorous flushing relatively quickly reduced the concentration to acceptable levels in this episode. EPA has not established a "safe, no adverse response level" (SNARL) for long-term exposure to chlordane in drinking water, but estimates (1,4) suggest that 1 excess cancer case may occur per 100,000 persons ingesting 2 liters/day of water containing chlordane at 0.3 ppb, over a 70-year lifetime. Concentrations in the affected system, when it was returned to normal service, indicate a proportionately lower risk to users. This risk should be reduced further by the likelihood that persons may consume less than 2 liters/day of affected water and that the continuous flushing action of normal water flow will eventually eliminate the minimal residual contamination.

References

1. National Research Council. Drinking water and health. Washington, DC: National Research Council, Safe Drinking Water Committee. National Academy of Sciences 1977;1:563-73.
2. Johnson EL. Velsicol Chemical Company, et al: consolidated heptachlor/chlordane cancellation proceedings. Federal Register 1978;43:12372-5.
3. CDC. Chlordane contamination of a municipal water system — Tennessee. MMWR 1976;25:117.
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Surveillance Summary**Occupational Injury Surveillance — United States**

The National Institute for Occupational Safety and Health (NIOSH), in conjunction with the Consumer Product Safety Commission (CPSC), recently developed a new surveillance system* to monitor all occupational injuries treated at a sample of 66 hospital emergency rooms, statistically selected to be representative of all U.S. hospital emergency rooms and placed in 5 categories according to hospital size and type. The number of sample hospitals selected from each category is proportional to the emergency-room usage for hospitals in that category.

Data in Table 1 show the types and estimated numbers of occupational injuries treated in U.S. hospital emergency rooms in the period September 24-30, 1981. In addition to these variables, detailed occupational injury information provided through this surveillance system includes treatment date, age, sex, type of accident, cause of accident, and disposition of case. As can be seen in Table 1, the most frequent type of injury is laceration (25.4%). Fingers are the most frequently injured body site (25.3%). Lacerations to the fingers (14.3%) are the most frequent type- and body site-specific occupational injury.

During a 3-month period beginning May 15, 1981, the estimated total number of occupational injuries (both lost-workday and nonlost-workday injuries) treated at all U.S. hospital emergency rooms was 839,061. This 3-month occupational injury experience extrapolates to a crude national estimate of 3.3 million occupational injuries treated in hospital emergency rooms for 1981. Seasonal differences are not addressed in this estimate; there may be a

*Based on the National Electronic Injury Surveillance System (NEISS) developed by CPSC in 1972.

Occupational Injury — Continued

slight increase in frequency of such injuries during the summer.

This new surveillance system may lead to annual national estimates of total numbers of occupational injuries different from those generated with other systems because of variations in definitions of reportable occupational injury and in employment coverage. Although other information bases may exclude certain minor injuries or establishments with limited employment, estimates generated with the NIOSH-CPSC system are based on all occupational injuries treated in hospital emergency rooms regardless of severity. The new system has fewer restrictions on definitions of employee populations at risk and increased utility for estimating injury patterns of the American worker. A salient characteristic of this increased utility is the ability of the surveillance system to provide occupational injury statistics that are more current than those previously available.

Reported by Div of Safety Research, NIOSH, CDC.

TABLE 1. Patterns of occupational injuries treated in hospital emergency rooms, by body site and type of injury, United States, September 24-30, 1981

Body site affected	NATURE OF OCCUPATIONAL INJURY*							
	Abrasion contusion, hematoma		Burn injury		Laceration		Puncture	
	#	%	#	%	#	%	#	%
Head-neck	770	1.3	0	0.0	734	1.2	0	0.0
Face	2,052	3.3	788	1.3	1,321	2.1	0	0.0
Arm	1,708	2.8	436	0.7	1,401	2.3	334	0.5
Wrist	330	0.5	0	0.0	108	0.2	196	0.3
Hand	946	1.5	588	1.0	2,150	3.5	521	0.9
Finger	2,491	4.1	144	0.2	8,796	14.3	1,199	2.0
Trunk	1,570	2.6	249	0.4	81	0.1	0	0.0
Leg	2,410	3.9	141	0.2	596	1.0	105	0.2
Ankle	137	0.2	146	0.2	27	0.1	0	0.0
Foot	1,585	2.6	108	0.2	162	0.3	733	1.2
Toe	411	0.7	115	0.2	283	0.5	0	0.0
Multiple sites	115	0.2	32	0.1	0	0.0	0	0.0
TOTAL	14,525	23.6	2,747	4.5	15,659	25.4	3,088	5.0

NATURE OF OCCUPATIONAL INJURY* (Continued)

Body site affected	Fracture		Foreign body		Sprain, strain		Other injury		TOTAL	
	#	%	#	%	#	%	#	%	#	%
Head-neck	0	0.0	0	0.0	743	1.2	354	0.6	2,601	4.2
Face	0	0.0	3,073	5.0	0	0.0	1,510	2.5	8,744	14.2
Arm	413	0.7	0	0.0	676	1.1	925	1.5	5,893	9.6
Wrist	63	0.1	0	0.0	1,115	1.8	0	0.0	1,812	2.9
Hand	81	0.1	115	0.2	238	0.4	549	0.9	5,188	8.4
Finger	925	1.5	115	0.2	195	0.3	1,697	2.8	15,562	25.3
Trunk	314	0.5	0	0.0	5,270	8.6	665	1.1	8,149	13.2
Leg	364	0.6	193	0.3	1,647	2.7	54	0.1	5,510	9.0
Ankle	222	0.4	0	0.0	1,717	2.8	0	0.0	2,249	3.7
Foot	186	0.3	0	0.0	269	0.4	108	0.2	3,151	5.1
Toe	469	0.8	0	0.0	0	0.0	196	0.3	1,474	2.4
Multiple sites	0	0.0	0	0.0	115	0.2	990	1.6	1,252	2.0
TOTAL	3,037	4.9	3,496	5.7	11,985	19.5	7,048	11.4	61,585	100.0

*Listed according to the primary diagnosis stated by attending physician.

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Epidemiologic Notes and Reports

Multiple Outbreaks of Salmonellosis Associated with Precooked Roast Beef — Pennsylvania, New York, Vermont

Since August 1981, when 3 outbreaks of salmonellosis associated with ingestion of pre-cooked roast beef were reported to CDC (1), 5 similar *Salmonella* outbreaks have occurred in the northeastern United States. Two outbreaks were associated with precooked roast beef processed in a Philadelphia, Pennsylvania, plant; at least 2 others were associated with precooked beef from an Albany, New York, processor.

Pennsylvania: In late August and September 1981, 2 outbreaks of salmonellosis were reported in eastern Pennsylvania. The first outbreak followed a picnic attended by approximately 60 persons in Montgomery County, Pennsylvania, on August 29. Of the 37 persons interviewed, 14 had been ill. *S. saint-paul* was isolated from stool specimens from 5 patients. Illness was positively associated with eating precooked roast beef and ham. The roast beef and ham were sliced on the same slicer and transported on the same serving tray to the picnic. No meat was available for culture.

The second outbreak occurred on September 29 following a neighborhood party attended by approximately 40 persons in Bucks County, Pennsylvania. Of the 20 persons interviewed, 11 had been ill, and 3 had been hospitalized. *S. saint-paul* was isolated from 5 of 6 stools cultured. Illness was again associated with eating precooked roast beef ($p < 0.001$, Fisher's exact test). No meat was available for culture; however, *S. saint-paul* was cultured from roast beef purchased September 24 at the same delicatessen that had catered the neighborhood party. Three members of one family not associated with the party had become ill after eating the roast beef. *S. saint-paul* was cultured from 2 of 3 stool specimens tested.

The beef from the processor associated with these 2 outbreaks is marketed as "VC Brand" and is supplied to 40 distributors in Pennsylvania, New Jersey, and Delaware.

New York: In a 1-week period in late September, 4 students at a college campus in Oswego County, New York, had diarrheal illness. Stool specimens from these 4 patients were positive for *Salmonella* (2, *S. chester*; 1, *S. tennessee*, and 1 not typed). Each of these 4 patients had recently eaten at a student union delicatessen where many consumers had complained of the unusual rareness of the roast beef. Because of this fact, county health officials requested that the U.S. Department of Agriculture (USDA) sample from the campus commissary 3 frozen roasts still in sealed containers as supplied by an Albany, New York, processor. *S. chester* was isolated from 2 of these roasts.

Another outbreak of diarrheal illness occurred after a funeral reception in Albany County, New York, on September 9. Of 18 persons who had attended, 12 were contacted. Four had been ill, and illness was again positively associated only with roast beef consumption ($p=0.03$, Fisher's exact test). Only 1 stool culture was obtained, from which *S. chester* was isolated. No beef was available for testing, but the beef had been purchased from a distributor