



# Morbidity and Mortality

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE / PUBLIC HEALTH SERVICE HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION  
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## EPIDEMIOLOGIC NOTES AND REPORTS SCOMBROID FISH POISONING IN CANNED TUNA FISH - United States

On Feb. 23, 1973, Star-Kist Foods, Inc., confirmed that it was recalling 2 lots of canned tuna that had been implicated in illness occurring in Minnesota, South Dakota, and Wisconsin. The recall, which was carried out under the supervision of the Food and Drug Administration (FDA), involved 6 1/2-ounce cans of Star-Kist chunk light tuna identifiable by a can code with G on the top line and D417 or D419 on the bottom line. These lots had been distributed through warehouses in Alabama, Arizona, California, Illinois, Minnesota, Missouri, Montana, New Jersey, and Oregon.

On February 26, a telephone survey of state epidemiologists was conducted by CDC. Illness associated with recent consumption of Star-Kist tuna was reported from 8 states, with symptoms including an immediate sensation of oral

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burning and blistering followed in 30-45 minutes by headache, urticaria, abdominal cramps, diarrhea, and cutaneous flushing. One hundred sixty six cases were reported from Minnesota, approximately 50 more from South Dakota, and 13 from Oregon. Additional reports of suspect cases were received from California, Nevada, Tennessee, Texas, and Wisconsin. No fatalities were reported.

Preliminary reports from FDA indicated that 9 assays for histamine revealed values ranging from 76 to 280 mg of

TABLE I. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	8th WEEK ENDING		MEDIAN 1968-1972	CUMULATIVE, FIRST 8 WEEKS		
	February 24, 1973	February 26, 1972		1973	1972	MEDIAN 1968-1972
Aseptic meningitis	28	33	33	292	298	236
Bruceellosis	4	2	2	16	15	10
Chickenpox	5,630	3,945	---	37,788	26,938	---
Diphtheria	7	6	6	23	18	26
Encephalitis, primary:						
Arthropod-borne and unspecified	12	11	17	119	128	158
Encephalitis, post-infectious	7	3	3	31	36	49
Hepatitis, serum (Hepatitis B)	115	179	109	1,058	1,463	975
Hepatitis, infectious (Hepatitis A)	870	1,100	1,033	7,509	8,720	8,592
Malaria	3	27	78	27	281	360
Measles (rubeola)	618	754	754	4,750	5,208	5,208
Meningococcal infections, total	40	40	72	240	297	538
Civilian	39	40	52	231	288	514
Military	1	—	15	9	9	43
Mumps	1,886	2,116	2,551	14,167	16,713	19,909
Rubella (German measles)	639	695	1,106	3,504	4,215	5,689
Tetanus	2	2	1	9	9	9
Tuberculosis, new active	620	656	---	4,276	4,298	---
Tularemia	1	3	2	14	17	15
Typhoid fever	1	8	4	25	37	37
Typhus, tick-borne (Rky. Mt. spotted fever)	1	—	—	4	9	3
Venereal Diseases:						
Gonorrhea	14,776	11,197	---	114,169	101,043	---
Syphilis, primary and secondary	497	403	---	4,141	3,376	---
Rabies in animals	56	75	76	448	529	529

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	—	Poliomyelitis, total:	—
Botulism:	—	Paralytic:	—
Congenital rubella syndrome: Calif. - 1	5	Psittacosis: Ore. - 1	3
Leprosy: Calif. - 1, Tex. - 1	10	Rabies in man:	—
Leptospirosis: Md. - 1	6	Trichinosis: * Conn. - 1	9
Plague:	—	Typhus, murine:	1

\*Delayed reports: Trichinosis: (1972) Alaska 1

**SCOMBROID FISH POISONING – Continued**

histamine per 100 gm of fish muscle in the incriminated lots. Assay of histamine content in a control sample of tuna from another brand revealed a histamine concentration of 2.7 mg per 100 gm.

(Reported by James Chin, M.D., State Epidemiologist, California State Department of Public Health; D. S. Fleming, M.D., State Epidemiologist, Minnesota State Department of Health; William M. Edwards, M.D., State Epidemiologist, Nevada State Department of Health and Welfare; Edward Press, M.D., State Health Officer, Oregon State Health Division; Ralph Erdmann, M.D., Director of Laboratories, St. Joseph Hospital, Mitchell, South Dakota, and Robert S. Westaby, M.D., State Epidemiologist, South Dakota State Department of Health; Robert H. Hutcheson, Jr., M.D., State Epidemiologist, Tennessee Department of Public Health; Neill Simpson, M.D., private physician, Waco, Texas, and M. S. Dickerson, M.D., State Epidemiologist, Texas State Department of Health; H. Grant Skinner, M.D., State Epidemiologist, Wisconsin Department of Health and Social Services; Field Investigations Branch, Office of the Associate Commissioner for Compliance, Food and Drug Administration; and 2 EIS Officers.)

**SHIGELLA SONNEI OUTBREAK – Kentucky**

Between September 1972 and January 1973, 112 cases of an intestinal illness due to *Shigella sonnei* occurred in Lexington, Kentucky, and neighboring counties. Diarrhea and fever occurred in over 90% of the patients in 87 households interviewed; 74% complained of vomiting, 54% chills, and 39% bloody diarrhea. Forty-five percent of the cases occurred in children 5 years of age and under.

Although evidence of a common source outbreak has not been substantiated, over 40% of the culture-proven cases were associated with 2 primary schools and 1 day care center. Sixty-seven percent of families interviewed gave a history suggestive of a known contact. A total of 84 additional cases were identified among 280 household contacts interviewed for an overall secondary attack rate of 29%. Age-specific secondary attack rates were highest among preschoolers (44%) with males predominating. Preschoolers receiving day care outside the home were significantly more likely to introduce illness into their families than were those who stayed at home.

Nature of housing, sewerage, and socioeconomic status of affected households generally paralleled that of the community. Number of rooms, family size, household population density, and sleeping arrangements did not correlate with illness.

Vigorous supervised handwashing in affected schools and careful follow-up of culture-proven cases were undertaken in the latter part of the epidemic; illness subsequently abated in the community at large. Results of further bacteriologic studies, including antibiotic sensitivity testing and colicin typing, are pending.

(Reported by Philip Weiler, M.D., Director, and Norma Godbey, R.N., Communicable Disease Coordinator, Lexington-Fayette County Health Department; Timothy Costitch, med-

**Editorial Note**

This is the 1st recorded outbreak of scombroid fish poisoning due to a commercially canned food product and the 9th reported scombroid outbreak since CDC began food-borne disease surveillance in 1966. The syndrome, which classically includes nausea, vomiting, facial flushing, intense headache, epigastric pain, burning sensation in the throat, dysphagia, thirst, pruritus, swelling of the lips, and urticaria, is typical of a histamine reaction. The disease is believed to be due to a substance termed saurine and other heat-stable breakdown products that are produced by the action of bacteria on the histidine of fish muscle. The diagnosis of scombroid poisoning is based on the characteristic clinical picture in conjunction with a history of recent consumption of fish of the suborder *Scombroidei* (tuna and related species). Laboratory confirmation may be obtained by analysis of the histamine content of the fish consumed. Levels of histamine in excess of 100 mg per 100 gm of fish muscle have been associated with clinical illness. Therapy includes supportive care and treatment with antihistamines and sympathomimetics as required for symptomatic relief. In rare cases, the syndrome has been associated with severe bronchospasm or shock.

ical student, University of Kentucky Medical School; Calixto Hernandez, M.D., State Epidemiologist, Kentucky State Department of Health; Gregory Filice, medical student assigned to CDC; and an EIS Officer.)

**Editorial Note**

A growing number of urban communities in the United States have reported increasing isolates of *S. sonnei* in recent years. This serotype has displaced *S. flexneri* 2 as the predominant causative agent of shigellosis, accounting for 79% of all shigella reported in 1972, compared with 45% in 1964. The same pattern has been observed in England and other Western European countries and in Japan (1,2). In addition, recent *S. sonnei* isolates have been characterized by an increasing frequency of multiple resistance to antibiotics, including ampicillin (3). The rising frequency of resistant isolates has paralleled the increasing use of ampicillin in the community, although there is no direct evidence of a cause and effect relationship. Because of the high incidence of ampicillin resistance in reported *S. sonnei* cases, ampicillin can no longer be regarded as the drug of choice for the treatment of shigellosis. Furthermore, antimicrobial therapy should be reserved for those patients whose illness is severe enough to warrant specific treatment with appropriately sensitive antibiotics.

**References**

1. Kostrzewski J, Stypulkowska-Misiurewicz H: Changes in the epidemiology of dysentery in Poland and the situation in Europe. Arch Immunol Ther Exp 16:429, 1968
2. Aoki Y: Serological groups of shigella in Japan and neighboring countries. Trop Med 10:116, 1968
3. Ross S, Controni G, Kahn N: Resistance of shigella to ampicillin and other antibiotics. JAMA 221:45, 1972

**BLASTOMYCOSIS – Minnesota**

In November 1972, 4 men in Bigfork, Minnesota, became ill with a disease compatible with blastomycosis. Symptoms included fever, myalgia, cough, and chest pain. Chest X-rays on the 4 patients were abnormal, and skin tests on 3 of the 4

showed a positive reaction to blastomycin. Sputum specimens obtained from all 4 patients were positive for *Blastomyces dermatitidis*. Weak complement fixation reactions to *B. dermatitidis* yeast form antigens were demonstrated in

sera from 2 of the 4 patients.

Epidemiologic investigation revealed that the only common association of the 4 men was the construction of a cabin near a lake approximately 15 miles north of Bigfork. In addition, many of their family members and friends had helped with the work or had spent leisure time there.

Seventeen family members and 5 friends were investigated. Chest X-rays were done on 16 of the 17 family members, and 8 were abnormal. Three of these 8 persons reported having symptoms similar to those of the initial 4 patients in November. All 17 family members were skin tested with blastomycin and histoplasmin; 11 showed a positive reaction to blastomycin, and 2 to histoplasmin. Sera from 2 persons with abnormal chest X-rays and from 1 with a normal film showed weak complement fixation titers to *B. dermatitidis* yeast form antigens. None of the 5 friends, who had only limited contact with the cabin, had abnormal chest X-rays or positive skin tests.

Samples of hay and rotten wood found near the cabin are being processed in an attempt to recover *B. dermatitidis*. Frozen soil and snow precluded soil sampling. (Reported by L. G. Drucker, M.D., private physician, Big-

fork; G. A. Sarosi, M.D., Assistant Chief, Medical Service, Minneapolis Veteran's Administration Hospital; D. S. Fleming, M.D., State Epidemiologist, Minnesota State Department of Health; the Mycoses Section, Ecological Investigations Program, CDC; and an EIS Officer.)

#### Editorial Note

This is the 1st possible common source outbreak of acute pulmonary blastomycosis reported to CDC. One other documented episode of epidemic blastomycosis has appeared in the literature (1), but it was not associated with a common source.

Although isolates of *B. dermatitidis* from a natural source have been reported from 1 laboratory (2), these findings have not been confirmed, and the natural reservoir remains unknown. In this outbreak, it appears likely that the source of infection is in or near the cabin.

#### References

1. Smith JG Jr, Harris JS, Conant NF, Smith DT: An epidemic of North American Blastomycosis. JAMA 158:641-646, 1955
2. Denton JF, DiSalvo AF: Isolation of *Blastomyces dermatitidis* from natural sites at Augusta, Georgia. Amer J Trop Med Hyg 13:716-722, 1964

### PROBABLE BOTULISM – Oklahoma

On Dec. 29, 1972, a 63-year-old woman in Oklahoma City, Oklahoma, became ill with bilateral diplopia, nausea, diarrhea, and abdominal cramps. Over the next few days, she developed bilateral ptosis and difficulty in swallowing and talking and was admitted to a local hospital on January 3. She gave no history of hypertension, thyroid disease, trauma, or recent febrile illness.

On neurologic examination, the patient had dilated pupils that responded poorly to light, bilateral ptosis, bilateral 7th nerve palsy, and a poor gag reflex. The patient had mild proximal weakness of the upper extremities. Deep tendon reflexes and plantar reflexes were normal, and there were no abnormalities in the sensory examination. She was afebrile, and her systolic blood pressure was normal.

A Tensilon\* test was performed, and her ptosis subsequently appeared to improve. A tentative diagnosis of myasthenia gravis was made, and she was placed on Mestinon\*. She had little clinical improvement, however, and repeat Tensilon tests were equivocal. On the 4th hospital day, she had a respiratory arrest and became comatose. A lumbar puncture yielded cerebrospinal fluid with normal protein and glucose and no cells. A review of an electromyogram performed earlier in her hospitalization showed a 10% increase in the amplitude of the muscle action potential during rapid, repetitive nerve stimulation.

Questioning of the patient's family on the 14th day of

\*Inclusion of trade names does not imply endorsement by the Public Health Service or the U.S. Department of Health, Education, and Welfare.

her illness revealed that 24-48 hours before the onset of her symptoms, she had eaten some home-canned vegetables which "tasted terrible". She discarded the vegetables, and no other family members ate them. The implicated food was not available for examination, and bacteriologic and toxin assay studies on similar home-canned foods showed no evidence of contamination by *Clostridium botulinum*. A serum specimen obtained from the patient 14 days after the onset of symptoms was negative for circulating botulinum toxin. The patient was not treated with botulinum antitoxin.

On the 14th hospital day, the patient died. Postmortem examination showed a left-sided pneumonia and petechiae on the surface of the brain. There was no evidence of a brain-stem cerebrovascular accident.

(Reported by C. G. Rule, M.D., Neurologist, Oklahoma City Clinic; Dale Peterson, M.D., Presbyterian Hospital, Oklahoma City; Mark A. Roberts, Staff Epidemiologist, and Stanley W. Ferguson, Ph.D., State Epidemiologist, Oklahoma State Department of Health; and an EIS Officer.)

#### Editorial Note

The clinical characteristics of this patient were compatible with a diagnosis of botulism, and the normal cerebrospinal fluid examination and the results of the electromyographic studies supported the diagnosis. Epidemiologic investigation implicated home-canned vegetables as the suspect food. Although serum studies were negative for botulinum toxin, these tests were performed on serum obtained on the 14th day of the patient's illness.

### INTERNATIONAL NOTES

#### SMALLPOX SURVEILLANCE – Worldwide

Between Jan. 1 and 30, 1973, 3,257 cases of smallpox were reported to the World Health Organization. These cases were all reported by 6 countries: Bangladesh, India, Pakistan, Ethiopia, Sudan, and Nepal, the last of which recorded importations only. This is the smallest number of countries ever

to record cases of smallpox in a single month and is in sharp contrast to the situation in January 1972, when 12 countries reported 1 or more cases.

In Africa, smallpox incidence in Ethiopia continues the  
(Continued on page 76)

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 24, 1973 AND FEBRUARY 26, 1972 (8th WEEK)

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS		
						Primary including unspec. cases		Post In- fectious	Serum (Hepatitis B)	Infectious (Hepatitis A)	
						1973	1972			1973	1973
UNITED STATES	28	4	5,630	7	23	12	11	7	115	870	1,100
NEW ENGLAND	-	-	554	-	2	-	-	1	3	72	68
Maine *	-	-	7	-	-	-	-	-	-	3	7
New Hampshire	-	-	8	-	-	-	-	-	-	7	5
Vermont	-	-	9	-	-	-	-	-	-	-	5
Massachusetts	-	-	188	-	-	-	-	-	1	24	25
Rhode Island	-	-	70	-	2	-	-	-	-	16	9
Connecticut	-	-	272	-	-	-	-	1	2	22	17
MIDDLE ATLANTIC	3	-	281	-	-	3	5	-	22	123	136
Upstate New York	1	-	1	-	-	-	1	-	4	34	33
New York City	-	-	98	-	-	-	1	-	5	20	30
New Jersey	1	-	NN	-	-	-	2	-	6	30	45
Pennsylvania	1	-	182	-	-	3	1	-	7	39	28
EAST NORTH CENTRAL	1	-	2,243	-	-	-	3	-	18	141	180
Ohio	-	-	379	-	-	-	1	-	1	20	33
Indiana *	-	-	490	-	-	-	-	-	2	15	8
Illinois	1	-	-	-	-	-	1	-	4	53	65
Michigan	-	-	465	-	-	-	1	-	9	49	65
Wisconsin	-	-	909	-	-	-	-	-	2	4	9
WEST NORTH CENTRAL	-	1	733	1	4	3	-	-	3	29	26
Minnesota	-	-	55	-	-	-	-	-	2	3	5
Iowa *	-	-	485	-	-	1	-	-	-	5	9
Missouri	-	-	66	-	-	-	-	-	-	15	4
North Dakota	-	-	73	-	-	-	-	-	-	-	-
South Dakota	-	-	5	1	4	-	-	-	-	2	-
Nebraska	-	1	29	-	-	-	-	-	1	-	1
Kansas	-	-	20	-	-	2	-	-	-	4	7
SOUTH ATLANTIC	7	2	468	-	-	3	2	-	18	183	173
Delaware	-	-	18	-	-	-	-	-	-	1	3
Maryland	-	-	23	-	-	-	-	-	1	23	24
District of Columbia	-	-	-	-	-	-	-	-	-	-	9
Virginia	1	1	44	-	-	-	-	-	5	24	16
West Virginia	-	-	364	-	-	-	-	-	1	10	10
North Carolina	1	-	NN	-	-	3	2	-	4	44	32
South Carolina	-	-	19	-	-	-	-	-	-	6	10
Georgia	-	1	-	-	-	-	-	-	-	15	20
Florida	5	-	-	-	-	-	-	-	7	60	49
EAST SOUTH CENTRAL	12	-	244	-	-	-	1	2	7	63	84
Kentucky	-	-	143	-	-	-	-	-	1	21	45
Tennessee	2	-	NN	-	-	-	1	-	-	25	27
Alabama	10	-	91	-	-	-	-	2	5	14	8
Mississippi	-	-	10	-	-	-	-	-	1	3	4
WEST SOUTH CENTRAL	1	-	626	-	2	-	-	-	14	97	118
Arkansas *	-	-	14	-	-	-	-	-	-	2	4
Louisiana	-	-	NN	-	-	-	-	-	-	15	17
Oklahoma	-	-	80	-	-	-	-	-	2	12	24
Texas	1	-	532	-	2	-	-	-	12	68	73
MOUNTAIN	-	-	120	-	-	-	-	1	1	31	75
Montana	-	-	25	-	-	-	-	-	-	8	3
Idaho	-	-	-	-	-	-	-	-	-	2	3
Wyoming	-	-	46	-	-	-	-	-	-	-	1
Colorado *	-	-	30	-	-	-	-	-	1	3	23
New Mexico	-	-	14	-	-	-	-	-	-	13	10
Arizona *	-	-	-	-	-	-	-	-	-	-	30
Utah	-	-	5	-	-	-	-	-	-	2	5
Nevada	-	-	-	-	-	-	-	1	-	3	-
PACIFIC	4	1	361	6	15	3	-	3	29	131	240
Washington	-	-	294	5	13	-	-	-	-	13	17
Oregon	-	-	-	1	1	-	-	-	-	21	34
California	3	1	-	-	1	3	-	3	23	90	178
Alaska *	1	-	54	-	-	-	-	-	5	2	6
Hawaii	-	-	13	-	-	-	-	-	1	5	5
Guam *	-	-	-	-	-	-	-	-	-	-	4
Puerto Rico	-	-	14	-	-	-	-	-	-	3	19
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-

\*Delayed reports: Aseptic meningitis: Guam 1  
Chickenpox: Me. 8, Ark. 1, Ariz. 2, Guam 8  
Encephalitis, primary: Colo. 1

Hepatitis B: Iowa 1, (1972) Alaska 1  
Hepatitis A: Me. 1, Ind. delete 1, Iowa delete 2, Ark. 11, Ariz. 5, Guam 1

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 24, 1973 AND FEBRUARY 26, 1972 (8th WEEK) - Continued

AREA	MALARIA		MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		RUBELLA	
	1973	Cum. 1973	1973	Cumulative		1973	Cumulative		1973	Cum. 1973	1973	Cum. 1973
				1973	1972		1973	1972				
UNITED STATES .....	3	27	618	4,750	5,208	40	240	297	1,886	14,167	639	3,504
NEW ENGLAND .....	-	2	234	1,962	322	2	13	11	48	535	56	338
Maine .....	-	-	-	8	59	-	-	1	2	17	-	10
New Hampshire .....	-	-	33	319	20	-	1	-	6	33	-	6
Vermont .....	-	1	-	26	54	1	1	-	1	78	-	5
Massachusetts .....	-	-	139	998	26	-	5	5	19	216	35	186
Rhode Island .....	-	-	21	169	51	-	-	5	8	59	1	7
Connecticut .....	-	1	41	442	112	1	6	-	12	132	20	124
MIDDLE ATLANTIC .....	1	5	32	351	363	4	31	31	215	1,296	35	343
Upstate New York .....	-	2	4	60	22	1	8	9	NN	NN	1	38
New York City .....	1	1	26	222	60	1	7	7	126	791	8	35
New Jersey .....	-	1	-	46	266	1	7	9	61	305	14	238
Pennsylvania .....	-	1	2	23	15	1	9	6	28	200	12	32
EAST NORTH CENTRAL .....	1	3	197	1,323	2,133	3	21	36	532	4,082	170	831
Ohio .....	-	-	14	75	61	2	14	14	88	555	16	97
Indiana .....	-	-	33	129	510	-	1	6	88	378	39	184
Illinois .....	1	2	62	458	640	-	1	6	65	743	28	114
Michigan .....	-	1	59	415	328	1	5	9	96	1,104	40	177
Wisconsin .....	-	-	29	246	594	-	-	1	195	1,302	47	259
WEST NORTH CENTRAL .....	-	-	20	125	224	5	21	24	163	1,232	50	366
Minnesota .....	-	-	3	10	5	-	-	3	7	34	16	35
Iowa .....	-	-	16	97	126	-	3	-	121	928	10	76
Missouri .....	-	-	1	4	66	3	11	4	11	124	1	166
North Dakota .....	-	-	-	6	20	-	-	-	4	24	3	24
South Dakota .....	-	-	-	-	2	-	2	1	-	3	-	2
Nebraska .....	-	-	-	1	5	1	1	5	2	31	16	42
Kansas .....	-	-	-	7	-	1	4	11	18	88	4	21
SOUTH ATLANTIC .....	1	5	20	142	507	6	38	62	286	1,609	71	285
Delaware .....	-	-	-	1	2	-	-	1	14	94	1	2
Maryland .....	-	-	-	-	4	1	10	7	27	217	4	6
District of Columbia .....	-	-	-	1	-	-	1	2	1	6	-	1
Virginia * .....	1	4	1	8	9	1	4	13	21	147	8	13
West Virginia .....	-	-	3	30	23	-	-	5	82	583	7	49
North Carolina .....	-	1	-	4	16	-	9	14	NN	NN	2	6
South Carolina .....	-	-	-	14	71	-	2	7	14	66	-	9
Georgia .....	-	-	-	7	20	2	8	-	-	7	-	3
Florida .....	-	-	16	77	362	2	4	13	127	489	49	196
EAST SOUTH CENTRAL .....	-	1	10	107	243	2	15	25	102	1,114	30	255
Kentucky .....	-	-	4	24	111	-	4	6	48	291	9	129
Tennessee .....	-	-	4	60	28	1	7	11	30	348	21	110
Alabama .....	-	1	-	-	66	-	2	6	20	150	-	8
Mississippi .....	-	-	2	23	38	1	2	2	4	325	-	8
WEST SOUTH CENTRAL .....	-	5	24	208	295	6	36	39	185	1,053	77	290
Arkansas * .....	-	-	-	4	6	-	2	6	3	32	-	8
Louisiana .....	-	1	-	13	11	1	4	13	4	12	-	-
Oklahoma .....	-	-	-	4	2	-	2	1	21	63	2	22
Texas .....	-	4	24	187	276	5	28	19	157	946	75	260
MOUNTAIN .....	-	2	34	107	428	-	8	5	126	800	28	174
Montana .....	-	1	-	1	9	-	1	-	6	68	-	8
Idaho .....	-	-	2	15	3	-	-	2	9	40	-	4
Wyoming .....	-	-	1	2	-	-	-	1	65	231	-	-
Colorado .....	-	-	5	22	203	-	2	-	9	64	21	86
New Mexico .....	-	1	26	59	26	-	1	1	37	263	6	22
Arizona * .....	-	-	-	8	95	-	1	-	-	101	-	7
Utah .....	-	-	-	-	92	-	1	1	-	31	1	46
Nevada .....	-	-	-	-	-	-	2	-	-	2	-	1
PACIFIC .....	-	4	47	425	693	12	57	64	229	2,446	122	622
Washington .....	-	-	2	200	195	-	3	7	31	258	9	80
Oregon .....	-	-	38	108	9	-	2	4	72	564	7	108
California .....	-	4	7	113	461	12	51	52	110	1,417	104	428
Alaska .....	-	-	-	-	5	-	1	-	11	172	-	-
Hawaii .....	-	-	-	4	23	-	-	1	5	35	2	6
Guam .....	-	-	-	2	-	-	-	2	-	1	-	1
Puerto Rico .....	-	-	27	308	60	1	1	-	13	126	4	11
Virgin Islands .....	-	-	-	-	-	-	-	2	-	2	-	-

\*Delayed reports: Measles: Va. delete 4  
Mumps: Ark. 1, Ariz. 3  
Rubella: Va. delete 1

## Morbidity and Mortality Weekly Report

TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES  
FOR WEEKS ENDING FEBRUARY 24, 1973 AND FEBRUARY 26, 1972 (8th WEEK) - Continued

AREA	TETANUS Cumulative 1973	TUBERCULOSIS (New Active)		TULA- REMIA Cumulative 1973	TYPHOID FEVER		TYPHUS-FEVER TICK-BORNE (Rky. Mt. spotted fever)		VENEREAL DISEASES		RABIES IN ANIMALS	
		1973	Cum. 1973		1973	Cum. 1973	1973	Cum. 1973	GONOR- RHEA	SYPHILIS (Pri. & Sec.)	1973	Cum. 1973
		1973	1973		1973	1973	1973	1973	1973	1973	1973	1973
UNITED STATES	9	620	4,276	14	1	25	1	4	14,776	497	56	448
NEW ENGLAND	-	34	148	-	-	1	-	-	311	16	7	26
Maine	-	1	10	-	-	-	-	-	20	1	4	23
New Hampshire	-	1	2	-	-	-	-	-	17	-	2	2
Vermont	-	-	3	-	-	-	-	-	2	2	-	-
Massachusetts	-	25	91	-	-	1	-	-	129	6	1	1
Rhode Island	-	1	9	-	-	-	-	-	38	-	-	-
Connecticut	-	6	33	-	-	-	-	-	105	7	-	-
MIDDLE ATLANTIC	3	158	885	-	-	4	-	1	2,105	91	-	4
Upstate New York	-	36	203	-	-	-	-	-	878	6	-	1
New York City	1	50	294	-	-	4	-	-	572	48	-	-
New Jersey	2	34	187	-	-	-	-	-	272	13	-	-
Pennsylvania	-	38	201	-	-	-	-	1	383	24	-	3
EAST NORTH CENTRAL	1	123	674	1	-	2	-	-	1,809	37	4	37
Ohio *	-	39	266	1	-	1	-	-	616	14	-	9
Indiana	-	29	101	-	-	-	-	-	236	4	2	6
Illinois	-	41	183	-	-	-	-	-	225	4	2	10
Michigan	-	14	102	-	-	1	-	-	489	14	-	-
Wisconsin	1	-	22	-	-	-	-	-	243	1	-	12
WEST NORTH CENTRAL	2	16	145	2	-	-	-	1	960	5	13	131
Minnesota	-	1	11	-	-	-	-	-	219	1	6	48
Iowa	-	3	24	-	-	-	-	-	82	2	4	43
Missouri	2	4	61	2	-	-	-	1	300	1	1	13
North Dakota	-	1	5	-	-	-	-	-	9	-	2	23
South Dakota	-	-	11	-	-	-	-	-	36	-	-	3
Nebraska	-	-	11	-	-	-	-	-	95	-	-	-
Kansas	-	7	22	-	-	-	-	-	219	1	-	1
SOUTH ATLANTIC	2	112	872	3	-	5	-	-	3,519	171	6	46
Delaware	-	-	9	-	-	-	-	-	39	2	-	-
Maryland	-	12	96	-	-	-	-	-	320	12	-	2
District of Columbia	-	8	47	-	-	-	-	-	265	10	-	-
Virginia *	-	7	109	1	-	-	-	-	279	44	2	18
West Virginia	-	11	43	-	-	-	-	-	72	-	1	8
North Carolina *	-	18	150	1	-	1	-	-	426	16	-	-
South Carolina	-	-	92	-	-	1	-	-	269	39	-	-
Georgia	-	24	138	1	-	1	-	-	804	26	2	11
Florida	2	32	188	-	-	2	-	-	1,045	22	1	7
EAST SOUTH CENTRAL	1	35	347	4	-	1	1	2	1,418	30	18	105
Kentucky *	-	6	78	1	-	-	-	-	146	10	8	41
Tennessee	-	13	96	3	-	-	1	1	410	6	7	43
Alabama	1	7	116	-	-	1	-	1	517	1	3	21
Mississippi *	-	9	57	-	-	-	-	-	345	13	-	-
WEST SOUTH CENTRAL	-	46	402	4	-	1	-	-	2,208	52	7	60
Arkansas	-	7	51	1	-	-	-	-	131	2	1	16
Louisiana *	-	6	101	-	-	-	-	-	561	11	-	3
Oklahoma	-	5	34	2	-	1	-	-	221	5	3	14
Texas	-	28	216	1	-	-	-	-	1,295	34	3	27
MOUNTAIN	-	3	126	-	-	1	-	-	446	23	-	4
Montana	-	1	4	-	-	-	-	-	26	-	-	-
Idaho	-	-	7	-	-	-	-	-	37	-	-	-
Wyoming	-	1	6	-	-	-	-	-	10	1	-	-
Colorado	-	-	15	-	-	-	-	-	112	7	-	-
New Mexico	-	1	31	-	-	1	-	-	28	4	-	-
Arizona	-	-	54	-	-	-	-	-	153	6	-	4
Utah	-	-	4	-	-	-	-	-	42	1	-	-
Nevada *	-	-	5	-	-	-	-	-	38	4	-	-
PACIFIC	-	93	677	-	1	10	-	-	2,000	72	1	35
Washington	-	9	54	-	-	-	-	-	166	1	-	-
Oregon	-	6	30	-	-	1	-	-	137	1	-	-
California	-	73	547	-	1	9	-	-	1,628	69	1	33
Alaska	-	-	8	-	-	-	-	-	41	1	-	2
Hawaii	-	5	38	-	-	-	-	-	28	-	-	-
Guam *	-	-	3	-	-	-	-	-	-	-	-	-
Puerto Rico	3	15	88	-	-	-	-	-	51	16	1	6
Virgin Islands	-	-	-	-	-	-	-	-	8	1	-	-

\*Delayed reports: TB: Ohio delete 1, (1972) N.C. delete 4, Ky. delete 2  
 RMSF: (1972) Va. 1  
 Gonorrhea: La. delete 1, Nev. 73, Guam 4

Syphilis: Miss. 1  
 Rabies: Ark. 3

# Morbidity and Mortality Weekly Report

**TABLE IV. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDING FEBRUARY 24, 1973**

Week No.  
8

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes			Pneumonia and Influenza All Ages	Area	All Causes			Pneumonia and Influenza All Ages
	All Ages	65 years and over	Under 1 year			All Ages	65 years and over	Under 1 year	
<b>NEW ENGLAND</b>	733	447	21	48	<b>SOUTH ATLANTIC</b>	1,356	761	48	87
Boston, Mass.	211	110	6	21	Atlanta, Ga.	160	73	8	15
Bridgeport, Conn.	51	27	1	4	Baltimore, Md.	239	130	2	10
Cambridge, Mass.	18	15	1	1	Charlotte, N. C.	64	33	4	2
Fall River, Mass.	34	24	—	2	Jacksonville, Fla.	95	64	3	1
Hartford, Conn.	74	38	3	1	Miami, Fla.	140	79	5	6
Lowell, Mass.	18	14	—	1	Norfolk, Va.	81	39	3	6
Lynn, Mass.	14	13	1	—	Richmond, Va.	90	45	—	8
New Bedford, Mass.	32	24	1	3	Savannah, Ga.	50	22	—	6
New Haven, Conn.	66	40	2	2	St. Petersburg, Fla.	153	129	3	8
Providence, R. I.	55	32	1	9	Tampa, Fla.	103	68	4	14
Somerville, Mass.	10	6	—	—	Washington, D. C.	152	63	16	8
Springfield, Mass.	50	34	2	2	Wilmington, Del.	29	16	—	3
Waterbury, Conn.	32	24	1	—	<b>EAST SOUTH CENTRAL</b>	778	439	36	51
Worcester, Mass.	68	46	2	2	Birmingham, Ala.	130	70	4	2
<b>MIDDLE ATLANTIC</b>	3,325	1,994	100	160	Chattanooga, Tenn.	53	23	7	13
Albany, N. Y.	63	38	2	6	Knoxville, Tenn.	44	31	1	1
Allentown, Pa.	37	22	—	3	Louisville, Ky.	123	74	8	7
Buffalo, N. Y.	155	93	4	11	Memphis, Tenn.	172	98	4	7
Camden, N. J.	41	25	2	4	Mobile, Ala.	84	50	3	4
Elizabeth, N. J.	35	20	—	3	Montgomery, Ala.	50	30	1	5
Erie, Pa.	40	23	—	7	Nashville, Tenn.	122	63	8	12
Jersey City, N. J.	56	30	3	3	<b>WEST SOUTH CENTRAL</b>	1,527	843	69	76
Newark, N. J.	91	42	1	3	Austin, Tex.	43	24	—	2
New York City, N. Y. †	1,491	902	48	54	Baton Rouge, La.	51	33	1	5
Paterson, N. J.	40	23	2	5	Corpus Christi, Tex.	69	40	6	3
Philadelphia, Pa.	606	371	14	10	Dallas, Tex.	203	103	10	2
Pittsburgh, Pa.	215	112	10	19	El Paso, Tex.	57	37	7	8
Reading, Pa.	37	31	1	1	Fort Worth, Tex.	98	64	2	4
Rochester, N. Y.	133	91	2	19	Houston, Tex.	315	158	9	12
Schenectady, N. Y.	21	15	—	—	Little Rock, Ark.	59	28	—	1
Scranton, Pa.	57	37	—	3	New Orleans, La.	181	85	13	2
Syracuse, N. Y.	104	56	7	3	Oklahoma City, Okla. *	107	63	5	4
Trenton, N. J.	34	15	1	2	San Antonio, Tex.	158	90	8	6
Utica, N. Y.	37	28	1	3	Shreveport, La.	94	54	3	7
Yonkers, N. Y.	32	20	2	1	Tulsa, Okla.	92	64	5	20
<b>EAST NORTH CENTRAL</b>	2,618	1,562	112	103	<b>MOUNTAIN</b>	587	343	27	29
Akron, Ohio	46	28	2	—	Albuquerque, N. Mex.	50	25	1	4
Canton, Ohio	36	22	1	5	Colorado Springs, Colo.	32	18	1	4
Chicago, Ill.	690	391	36	15	Denver, Colo.	146	95	4	7
Cincinnati, Ohio	121	80	3	13	Las Vegas, Nev.	16	4	1	1
Cleveland, Ohio	219	120	6	8	Ogden, Utah	23	12	3	1
Columbus, Ohio	135	81	6	6	Phoenix, Ariz.	150	89	7	2
Dayton, Ohio	99	52	4	3	Pueblo, Colo.	23	17	1	4
Detroit, Mich.	397	233	23	11	Salt Lake City, Utah	81	49	6	3
Evansville, Ind.	53	36	1	2	Tucson, Ariz.	66	34	3	3
Fort Wayne, Ind.	49	37	1	4	<b>PACIFIC</b>	1,754	1,076	49	89
Gary, Ind.	39	17	3	3	Berkeley, Calif.	25	17	—	1
Grand Rapids, Mich.	57	41	2	6	Fresno, Calif.	47	30	3	4
Indianapolis, Ind.	161	100	4	4	Glendale, Calif.	24	20	—	2
Madison, Wis.	31	15	4	3	Honolulu, Hawaii	65	36	2	—
Millwaukee, Wis.	142	102	1	5	Long Beach, Calif.	106	67	3	7
Peoria, Ill.	59	35	7	—	Los Angeles, Calif.	571	321	23	23
Rockford, Ill.	42	23	3	2	Oakland, Calif.	82	53	2	4
South Bend, Ind.	40	27	1	6	Pasadena, Calif.	31	22	—	1
Toledo, Ohio	129	76	3	4	Portland, Oreg.	150	98	2	9
Youngstown, Ohio	73	46	1	3	Sacramento, Calif.	59	32	3	3
<b>WEST NORTH CENTRAL</b>	890	552	40	56	San Diego, Calif.	107	65	2	1
Des Moines, Iowa	56	30	6	2	San Francisco, Calif.	190	121	2	8
Duluth, Minn.	23	19	2	5	San Jose, Calif.	50	28	2	2
Kansas City, Kans.	38	17	3	—	Seattle, Wash.	132	84	1	11
Kansas City, Mo.	131	83	6	4	Spokane, Wash.	69	50	2	7
Lincoln, Nebr.	27	14	1	5	Tacoma, Wash.	46	32	2	6
Minneapolis, Minn.	144	89	10	5	<b>Total</b>	13,568	8,017	502	699
Omaha, Nebr.	79	50	2	1	<b>Expected Number</b>	13,537	7,947	548	589
St. Louis, Mo.	197	113	3	6	<b>Cumulative Total (includes reported corrections for previous weeks)</b>	116,330	70,233	4,059	6,679
St. Paul, Minn.	91	68	3	7					
Wichita, Kans.	104	69	4	21					

†Delayed report for week ended Feb. 17, 1973

\*Estimate based on average percent of divisional total

**SMALLPOX – Continued**

steady decline begun in March 1972, and the total cases for January 1973 is 85% less than in January 1972. Only 1 case has been detected in Sudan for more than 4 weeks, and none have been reported in Botswana since late October. Except for well-documented importations from these countries, no cases have been detected elsewhere in Africa for the past 17 months.

In Asia, the smallpox situation is equally encouraging in Afghanistan where no cases have been detected for more than 8 weeks, in Indonesia where the last known cases occurred more than a year ago, and in Nepal where all cases since June have been traced directly or indirectly to importations from India.

In India, Bangladesh, and Pakistan, however, there is cause for concern. In December, all 3 countries recorded a higher incidence of smallpox than in any December period

since 1967. While improved surveillance and more complete reporting of cases undoubtedly account in part for this, it is also clear that extensive outbreaks are in progress in India (especially in the States of Uttar Pradesh, Madhya Pradesh, West Bengal, Jammu and Kashmir, and Bihar), in Bangladesh (primarily in the central and southwestern districts), and in Pakistan (Sind Province and adjoining areas). As December is only the beginning of the smallpox season, a continuing increase in incidence through April may be expected in these countries unless far more vigorous efforts are made to contain the spread of infection. Travelers to these countries should assure before departure that they are successfully vaccinated with fully potent freeze-dried vaccine.

*(Reported by the World Health Organization: Weekly Epidemiological Record, Vol. 48, No. 5, Feb. 2, 1973.)*

**QUARANTINE MEASURES**

The following changes should be made in the "Supplement – United States Designated Yellow Fever Vaccination Centers." MMWR, Vol. 21, No. 20:

**HAWAII**

**Hilo** University of Hawaii  
(Change name to Peace Corps Project  
Change address to: 144 Haili St. 96720  
Change telephone to 808, 935-1056)

**NEW YORK**

**Albany** State Dept. of Health 12208  
(Delete: Division of Laboratories and  
Research.  
Insert: Dept. of Health Bldg.)

**OHIO**

**Akron** Health Dept., John D. Morley Health  
Center 44308  
(Clinic hours: Delete Fri., 9 a.m.  
Insert: Thurs., 9 a.m.)

**OKLAHOMA**

**Bartlesville** Phillips Petroleum Co.  
(Change address to Medical Dept.  
Change code to 74004)

**Enid**

Garfield County Health Dept. 73701  
(Change clinic hours to: 1st Mon. each  
month, 2 p.m.)

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In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting outbreaks or case investigations of current interest to health officials.

Address all correspondence to: Center for Disease Control  
Attn: Editor  
Morbidity and Mortality Weekly Report  
Atlanta, Georgia 30333

The data in this report are provisional, based on weekly telegraphs to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday.

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE  
PUBLIC HEALTH SERVICE  
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