

CENTER FOR DISEASE CONTROL



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WEEKLY
REPORT

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

MICROBIOLOGIC STANDARDS FOR RAW GROUND BEEF, COLD CUTS, AND FRANKFURTERS

To insure optimum quality of sanitation and to reduce potential health hazards, some cities and states have adopted or are considering adopting regulations that establish microbiologic standards at the time of purchase for meats, particularly ground beef, cold cuts, and frankfurters. In response to this interest, CDC's foodborne disease surveillance data for these meat products have been analyzed.

From 1966 through 1973, 2,464 foodborne outbreaks were reported to CDC. In 1,827 (74%) of these outbreaks the food vehicle was identified. Ninety-one (5.0%) of the 1,827 were attributed to the above meat products: 65 (3.6%) were caused by ground beef, 6 (0.3%) by cold cuts, and 20 (1.1%) by frankfurters. In 29 of the 91 outbreaks, the proximate

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cause was determined: 1 was the result of a food-processing error before consumer purchase; the other 28 were the result of improper food handling after purchase.

Of the 65 outbreaks reportedly due to ground beef, the etiologic agent was identified in 9. Three of these 9 were caused by nontyphoid salmonellosis, 2 by *Clostridium perfringens*, 2 by chemicals, 1 by *Clostridium botulinum*, and 1

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

DISEASE	27th WEEK ENDING		MEDIAN 1970-1974	CUMULATIVE, FIRST 27 WEEKS		
	July 5, 1975	July 6, 1974		1975	1974	MEDIAN 1970-1974
Aseptic meningitis	78	49	80	1,119	1,055	1,070
Brucellosis	3	2	3	106	79	81
Chickenpox	1,333	1,495	---	111,648	95,062	---
Diphtheria	6	2	2	204	147	100
Encephalitis	Primary	7	7	350	434	570
	Post-Infectious	12	5	170	135	159
Hepatitis, Viral	Type B	203	149	5,751	4,795	4,411
	Type A	569	590	18,282	22,252	28,841
	Type unspecified	167	113	4,202	4,410	---
Malaria	6	9	13	162	85	599
Measles (rubeola)	352	283	347	19,400	18,381	25,182
Meningococcal infections, total	15	23	20	858	794	885
	Civilian	15	22	22	841	771
Military	---	1	1	17	23	33
Mumps	688	602	784	43,111	41,184	52,494
Pertussis	23	25	---	658	675	---
Rubella (German measles)	91	89	195	14,153	8,717	24,882
Tetanus	1	4	2	38	34	52
Tuberculosis	604	481	---	17,107	15,710	---
Tularemia	---	5	5	55	70	67
Typhoid fever	7	12	8	152	185	158
Typhus, tick-borne (Rky. Mt. spotted fever)	32	27	24	321	330	189
Venereal Diseases:						
Gonorrhea	Civilian	18,919	18,067	---	488,137	444,633
	Military	491	625	---	15,227	14,837
Syphilis, primary and secondary	Civilian	409	507	---	13,162	12,892
	Military	2	10	---	180	235
Rabies in animals	22	35	51	1,233	1,532	1,970

TABLE II. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax	---	Poliomyelitis, total:	1
Botulism: Fla. 1	13	Paralytic:	1
Congenital rubella syndrome: Mo. 1	12	Psittacosis:	19
Leprosy: N.C. 1, Hawaii 3	98	Rabies in man:	1
Leptospirosis: *	19	Trichinosis:	48
Plague: Ariz. 2	5	Typhus, murine:	12

*Delayed reports: Leptospirosis: Penn. delete 1

MICROBIOLOGIC STANDARDS — Continued

by *Salmonella typhi*. Data concerning the place where ground beef was mishandled were available in 27 of the 65 outbreaks. Ground beef was mishandled in food-service establishments in 18 of the 27 outbreaks and in private homes in 8. The food-processing industry was responsible for 1 outbreak. This was an outbreak of botulism associated with meatballs in spaghetti sauce prepared in the kitchen of a restaurant (1). Specific post-purchase food-handling errors were identified in 15 of these 27 outbreaks (Table 1).

Table 1
Food-Handling Errors in Food-Service Establishments
and Homes in 15 Outbreaks Attributed to Ground Beef*
1967-1973

Improper Storage or Improper Handling Temperature	9
Inadequate Cooking	2
Contaminated Equipment or Working Surfaces	2
Poor Personal Hygiene of Food Handler	2
Other	4

*In several outbreaks more than 1 error was identified.

Of the 6 outbreaks attributed to cold cuts, 1 was caused by *Salmonella anatum*. The place of contamination was not determined in any of these 6 outbreaks.

Of the 20 outbreaks traced to frankfurters, the etiology was established in 1; it was caused by *Trichinella spiralis*.* The places where the frankfurters were mishandled were determined in 2 of these outbreaks; both were restaurants.

From 1972 through 1975, the United States Department of Agriculture intermittently surveyed raw-beef patties, frankfurters, and sliced luncheon meat for salmonellae as part of a continuing microbiologic surveillance program. Three (0.4%) of 735 raw finished beef patties were found contaminated with salmonellae, but salmonella contamination was not found in samples of frankfurters or luncheon meat (Table 2).

(Reported by Microbiology Staff, Meat and Poultry Inspection Program, Animal and Plant Health Inspection Service, United States Department of Agriculture; Bacterial Diseases Division, Bureau of Epidemiology, CDC.)

*This outbreak and 21 outbreaks of trichinosis associated with pork sausage are not analyzed in this report.

Table 2
Surveys for Salmonellae in Raw Beef Patties, Frankfurters, and
Sliced Luncheon Meat
1972-1975*

Product	Samples Examined	Samples Positive
Raw Beef Patties		
Raw Trimmings Used	690	1
Raw Finished Patties	735	3
Frankfurters		
Raw Trimmings Used	842	56
Cooked Finished Frankfurters	690	0
Sliced Luncheon Meat		
Raw Trimmings Used	936	69
Cooked Sliced Luncheon Meat	456	0

*Conducted by USDA

Editorial Note

These data, although based on incomplete reporting, show that ground beef, cold cuts, and frankfurters are relatively infrequently associated with outbreaks reported to CDC and that, in outbreaks that were reported for which a place of contamination was identified, the proximate causes with 1 exception were post-purchase food-handling errors. When these data are considered in the light of the high volume of sales of these products, it is apparent that these meat products are not high-risk foods. Their relative safety is further substantiated by surveys specifically searching for salmonellae.

These data further suggest that in the prevention of disease due to these meat products, a reasonable means of control is health education directed to the food-service industry and the homemaker. Such health education should emphasize proper cooking, handling, and storage of food. This approach when combined with active foodborne disease surveillance that includes careful investigation of foodborne outbreaks may be considered a more effective means of control than requiring microbiologic standards for these meat products.

Reference

1. Center for Disease Control: Botulism, type A, in a family—Libertyville, Illinois. Morbidity and Mortality Weekly Report 19(31):305-306, 8 August 1970

INTERNATIONAL NOTES
QUARANTINE MEASURES

The following changes should be made in the listing of US Designated Yellow Fever Vaccination Centers included in the "Supplement—Health Information for International Travel," MMWR, Vol 23, September 1974:

CONNECTICUT — Stamford
City Health Dept
229 North St 06902
Phone: 203 348-5841 ext 236
By appointment; fee

PENNSYLVANIA — Wilkes-Barre
Wilkes-Barre State Health Center
100 Hazle St 18702
Phone: 717 825-7511 ext 351
By appointment Wed a.m.; no fee

VERMONT — Burlington
Medical Center Hospital of Vermont
05401
Phone: 802 656-2345
Tues, 10:30-11:30 a.m.; no fee

CURRENT TRENDS

TUBERCULOSIS CASES AND CASE RATES IN 1974 — United States

In 1974, a total of 30,122 new cases of active tuberculosis were reported in the United States, a decrease of 2.8% from 1973 (Table 3). The 1974 case rate was 14.2 per 100,000 population, a decline of 4.1% from the 1973 figure of 14.8.

Case rates ranged from a high of 43.0 in Hawaii to a low of 2.7 in Nebraska.

(Reported by Tuberculosis Control Division, Bureau of State Services, CDC.)

(See table, page 235)

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**TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JULY 5, 1975 AND JULY 6, 1974 (27th WEEK)**

AREA	ASEPTIC MENIN- GITIS	BRUCEL- LOSIS	CHICKEN- POX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS, VIRAL			MALARIA	
						Primary: Arthropod- borne and Unspecified		Post In- fectious	Type B	Type A	Type Unspecified		
						1975	1974	1975	1975	1975	1975		
UNITED STATES	78	3	1,333	6	204	7	7	12	203	569	167	6	162
NEW ENGLAND	-	-	177	-	-	-	-	-	2	11	9	-	7
Maine	-	-	1	-	-	-	-	-	-	-	-	-	1
New Hampshire	-	-	1	-	-	-	-	-	-	-	-	-	-
Vermont	-	-	6	-	-	-	-	-	1	-	-	-	2
Massachusetts	-	-	36	-	-	-	-	-	-	3	8	-	2
Rhode Island	-	-	87	-	-	-	-	-	1	2	-	-	-
Connecticut	-	-	46	-	-	-	-	-	-	6	1	-	2
MIDDLE ATLANTIC	6	-	87	-	-	-	1	2	57	66	46	3	27
Upstate New York	1	-	30	-	-	-	1	2	16	25	22	-	5
New York City	1	-	56	-	-	-	-	-	10	10	-	2	11
New Jersey	4	-	NN	-	-	-	-	-	23	20	20	1	8
Pennsylvania	-	-	1	-	-	-	-	-	8	11	4	-	3
EAST NORTH CENTRAL	3	-	749	-	2	1	1	3	28	92	3	-	2
Ohio	-	-	256	-	-	1	-	1	11	23	-	-	-
Indiana	-	-	30	-	-	-	-	-	1	11	-	-	-
Illinois	1	-	84	-	1	-	1	-	5	17	2	-	2
Michigan	2	-	138	-	1	-	-	1	5	26	1	-	-
Wisconsin	-	-	241	-	-	-	-	1	6	15	-	-	-
WEST NORTH CENTRAL	4	-	36	-	6	-	-	-	4	19	20	-	6
Minnesota	1	-	-	-	-	-	-	-	-	-	-	-	4
Iowa	1	-	8	-	-	-	-	-	-	-	-	-	-
Missouri *	2	-	1	-	-	-	-	-	1	-	11	-	2
North Dakota *	-	-	-	-	6	-	-	-	-	8	-	-	-
South Dakota	-	-	25	-	-	-	-	-	-	1	-	-	-
Nebraska	-	-	2	-	-	-	-	-	1	4	-	-	-
Kansas	-	-	-	-	-	-	-	-	2	6	9	-	-
SOUTH ATLANTIC	15	3	132	-	-	3	2	4	19	106	22	-	26
Delaware	-	-	5	-	-	-	-	-	-	-	-	-	-
Maryland	2	-	5	-	-	-	1	-	1	8	6	-	3
District of Columbia	-	-	1	-	-	1	-	-	-	-	-	-	5
Virginia	2	-	10	-	-	1	1	-	10	9	4	-	5
West Virginia	-	-	52	-	-	-	-	-	-	1	-	-	1
North Carolina	-	-	NN	-	-	-	-	-	3	5	1	-	3
South Carolina	-	1	28	-	-	-	-	-	2	4	-	-	-
Georgia	-	1	-	-	-	-	-	-	-	25	-	-	5
Florida	11	1	31	-	-	1	-	4	3	54	11	-	4
EAST SOUTH CENTRAL	9	-	3	-	-	-	1	1	17	49	2	1	8
Kentucky	-	-	2	-	-	-	-	-	1	9	-	-	3
Tennessee	2	-	NN	-	-	-	-	-	4	17	-	-	-
Alabama	7	-	1	-	-	-	1	1	12	18	2	1	4
Mississippi	-	-	-	-	-	-	-	-	-	5	-	-	1
WEST SOUTH CENTRAL	20	-	40	-	2	1	-	-	6	64	6	-	15
Arkansas *	1	-	-	-	-	-	-	-	-	13	-	-	1
Louisiana	4	-	NN	-	-	-	-	-	1	3	-	-	-
Oklahoma	1	-	1	-	-	-	-	-	-	3	-	-	1
Texas *	14	-	39	-	2	1	-	-	5	45	6	-	13
MOUNTAIN	2	-	35	-	14	2	-	-	8	32	10	-	13
Montana	-	-	5	-	-	-	-	-	-	1	-	-	-
Idaho	1	-	-	-	-	-	-	-	-	7	2	-	-
Wyoming	-	-	-	-	-	-	-	-	-	-	-	-	-
Colorado	-	-	30	-	-	1	-	-	3	-	1	-	8
New Mexico	-	-	-	-	1	1	-	-	4	10	2	-	-
Arizona	-	-	-	-	13	-	-	-	-	2	1	-	3
Utah	1	-	-	-	-	-	-	-	1	10	4	-	2
Nevada	-	-	-	-	-	-	-	-	-	2	-	-	-
PACIFIC	19	-	74	6	180	-	2	2	62	130	49	2	58
Washington	1	-	23	6	172	-	-	-	7	14	14	1	4
Oregon	-	-	-	-	-	-	-	-	2	13	4	-	1
California *	15	-	-	-	3	-	2	2	50	97	31	1	50
Alaska	3	-	4	-	5	-	-	-	2	5	-	-	-
Hawaii	-	-	47	-	-	-	-	-	1	1	-	-	3
Guam *	-	-	-	-	-	-	-	-	-	-	-	-	-
Puerto Rico	---	---	---	---	-	---	---	---	---	---	---	---	1
Virgin Islands	-	-	-	-	-	-	-	-	-	-	-	-	-

*Delayed reports: Aseptic Meningitis: Ark. 19
 Chickenpox: Texas 122, Calif. 41, Guam 5
 Encephalitis, primary: Ark. delete 1
 Hepatitis B: (1974) Mo. 1
 Hepatitis A: (1974) Mo. 2; (1975) N.D. 1, Guam 2
 Hepatitis unspecified: Guam 5

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TABLE III. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDING JULY 5, 1975 AND JULY 6, 1974 (27th WEEK) - Continued

AREA	MEASLES (Rubeola)			MENINGOCOCCAL INFECTIONS, TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1975	Cumulative		1975	Cumulative		1975	Cum. 1975	1975	1975	Cum. 1975	Cum. 1975
		1975	1974		1975	1974						
UNITED STATES	352	19,400	18,381	15	858	794	688	43,111	23	91	14,153	38
NEW ENGLAND	5	260	861	1	47	41	45	1,456	-	5	1,947	1
Maine *	-	10	38	-	5	2	-	70	-	-	29	-
New Hampshire	-	19	207	-	1	7	-	69	-	-	302	-
Vermont	-	43	56	-	-	1	-	16	-	2	67	-
Massachusetts	2	95	341	-	15	12	2	174	-	2	1,161	1
Rhode Island	-	1	59	-	3	7	21	554	-	-	25	-
Connecticut	3	92	160	1	23	12	22	573	-	1	363	-
MIDDLE ATLANTIC	58	1,542	7,431	-	87	106	75	2,166	6	9	1,613	7
Upstate New York	19	459	734	-	27	45	45	865	5	4	241	-
New York City	9	114	481	-	22	14	19	551	-	3	145	2
New Jersey	3	446	5,393	-	12	33	4	322	-	1	967	3
Pennsylvania	27	523	823	-	26	14	7	428	1	1	260	2
EAST NORTH CENTRAL	113	5,824	7,201	2	121	94	259	18,169	6	28	3,897	2
Ohio	-	99	2,977	-	25	33	58	2,027	1	2	592	-
Indiana	3	334	202	1	6	8	15	1,894	-	3	878	-
Illinois	72	1,502	1,775	1	19	10	39	2,082	-	7	270	2
Michigan	30	2,942	1,846	-	55	29	50	7,820	1	5	1,363	-
Wisconsin	8	947	401	-	16	14	97	4,346	4	11	794	-
WEST NORTH CENTRAL	25	4,634	648	1	47	63	4	3,126	-	2	1,512	1
Minnesota	-	2	78	1	10	21	3	36	-	1	35	-
Iowa *	17	462	120	-	5	11	1	984	-	1	21	-
Missouri *	-	251	246	-	21	16	-	873	-	-	727	1
North Dakota	-	1,034	25	-	-	2	-	433	-	-	60	-
South Dakota	3	355	27	-	1	3	-	5	-	-	18	-
Nebraska	3	394	2	-	2	1	-	32	-	-	18	-
Kansas	2	2,136	150	-	8	9	-	763	-	-	633	-
SOUTH ATLANTIC	3	254	418	4	176	156	54	2,709	2	6	1,473	8
Delaware	-	32	6	-	6	3	-	7	-	-	18	-
Maryland	2	41	21	1	18	17	16	145	-	1	37	-
District of Columbia	-	1	3	-	5	-	-	101	-	-	-	-
Virginia	-	22	21	1	16	28	15	654	-	1	306	-
West Virginia	1	122	114	-	5	6	5	957	-	1	172	-
North Carolina	-	-	4	-	34	36	4	77	-	1	39	3
South Carolina	-	-	39	1	29	13	1	37	1	-	725	1
Georgia	-	11	4	-	9	7	-	11	1	-	-	-
Florida	-	25	206	1	54	46	13	720	-	2	176	4
EAST SOUTH CENTRAL	5	260	169	4	130	88	62	3,971	1	5	912	2
Kentucky	-	81	110	-	55	36	12	1,553	-	1	220	1
Tennessee *	4	168	33	2	43	39	44	1,814	1	4	665	-
Alabama	-	3	13	2	22	9	5	349	-	-	20	-
Mississippi	1	8	13	-	10	4	1	255	-	-	7	1
WEST SOUTH CENTRAL	2	259	161	3	137	136	34	3,918	2	5	674	9
Arkansas	-	-	6	-	8	10	1	167	-	-	19	-
Louisiana	-	-	13	-	24	27	1	316	-	-	276	3
Oklahoma	-	116	23	-	9	13	3	153	-	-	82	-
Texas	2	143	119	3	96	86	29	3,282	2	5	297	6
MOUNTAIN	31	1,258	715	-	32	23	33	779	1	1	485	-
Montana *	2	39	369	-	5	1	2	13	-	-	250	-
Idaho	-	5	50	-	5	2	-	12	-	1	73	-
Wyoming	-	1	1	-	-	3	-	2	-	-	-	-
Colorado	12	1,064	29	-	9	4	30	552	-	-	119	-
New Mexico	-	13	52	-	4	2	-	19	1	-	15	-
Arizona	-	56	12	-	1	4	-	-	-	-	2	-
Utah	15	56	3	-	7	4	-	104	-	-	19	-
Nevada	2	24	199	-	1	3	1	77	-	-	7	-
PACIFIC	110	5,109	777	-	81	87	122	6,817	5	30	1,640	8
Washington	8	254	55	-	15	8	11	3,598	1	1	259	-
Oregon	-	188	-	-	4	9	6	523	-	1	129	-
California	99	4,609	665	-	61	64	103	2,628	4	26	1,238	8
Alaska	-	-	-	-	-	3	-	40	-	-	-	-
Hawaii	3	58	57	-	1	3	2	28	-	2	14	-
Guam *	-	17	11	-	2	1	-	17	-	-	7	-
Puerto Rico	---	493	510	---	1	4	---	594	---	---	17	10
Virgin Islands	-	8	22	-	-	-	-	210	-	-	3	2

*Delayed reports: Measles: Iowa delete 1, Mont. delete 1, Rubella: Me. 1, Tenn. 90, Guam 1
Guam 2
Pertussis: Mo. 2

TUBERCULOSIS - Continued

Table 3
New Active Tuberculosis Cases and Case Rates: States, 1974 and 1973

State	New Active Cases		Case Rate		Rank According to Rate		Population July 1, 1974
	1974	1973	1974	1973	1974	1973	
United States	30,122	30,998	14.2	14.8	211,390,000
Alabama	785	790	21.9	22.3	4	5	3,577,000
Alaska	101	100	30.0	30.3	2	2	337,000
Arizona	349	416	16.2	20.2	17	8	2,153,000
Arkansas	405	460	19.6	22.6	7	4	2,062,000
California	3,286	3,210	15.7	15.6	19	18	20,907,000
Colorado	171	197	6.9	8.1	40	39	2,496,000
Connecticut	278	259	9.0	8.4	37	37	3,088,000
Delaware	99	74	17.3	12.8	13	24	573,000
District of Columbia	351	307	48.5	41.2	723,000
Florida	1,460	1,487	18.0	19.4	11	12	8,090,000
Georgia	953	1,010	19.5	21.1	8	7	4,882,000
Hawaii	364	303	43.0	36.4	1	1	847,000
Idaho	38	38	4.8	4.9	46	46	799,000
Illinois	1,496	1,520	13.4	13.5	21	21	11,131,000
Indiana	598	677	11.2	12.7	29	26	5,330,000
Iowa	124	125	4.3	4.3	47	50	2,855,000
Kansas	159	172	7.0	7.5	39	40	2,270,000
Kentucky	619	674	18.4	20.2	10	9	3,357,000
Louisiana	475	469	12.6	12.5	24	28	3,764,000
Maine	91	107	8.7	10.4	38	35	1,047,000
Maryland	852	719	20.8	17.7	5	15	4,094,000
Massachusetts	650	676	11.2	11.6	30	30	5,800,000
Michigan	1,125	1,121	12.4	12.4	25	29	9,098,000
Minnesota	195	183	5.0	4.7	44	48	3,917,000
Mississippi	394	445	17.0	19.5	15	11	2,324,000
Missouri	564	608	11.8	12.8	27	25	4,777,000
Montana	88	60	12.0	8.3	26	38	735,000
Nebraska	41	67	2.7	4.3	50	49	1,543,000
Nevada	56	61	9.8	11.1	33	32	573,000
New Hampshire	32	52	4.0	6.6	49	44	808,000
New Jersey	1,012	1,075	13.8	14.6	20	19	7,330,000
New Mexico	195	221	17.4	20.0	12	10	1,122,000
New York	2,866	3,110	15.8	17.0	18	17	18,111,000
North Carolina	926	974	17.3	18.5	14	14	5,363,000
North Dakota	36	44	5.7	6.9	43	43	637,000
Ohio	1,141	1,218	10.6	11.4	31	31	10,737,000
Oklahoma	282	351	10.4	13.2	32	22	2,709,000
Oregon	207	239	9.1	10.7	36	33	2,266,000
Pennsylvania	1,552	1,689	13.1	14.2	22	20	11,835,000
Rhode Island	108	90	11.5	9.2	28	36	937,000
South Carolina	641	619	23.0	22.7	3	3	2,784,000
South Dakota	63	90	9.2	13.1	35	23	682,000
Tennessee	854	889	20.7	21.5	6	6	4,129,000
Texas	2,311	2,224	19.2	18.9	9	13	12,050,000
Utah	49	56	4.2	4.8	48	47	1,173,000
Vermont	23	32	4.9	6.9	45	42	470,000
Virginia	799	839	16.3	17.4	16	16	4,908,000
Washington	336	362	9.7	10.6	34	34	3,476,000
West Virginia	233	226	13.0	12.6	23	27	1,791,000
Wisconsin	265	238	5.8	5.2	42	45	4,566,000
Wyoming	24	25	6.7	7.1	41	41	359,000
Puerto Rico*	585	519	19.3	19.1	3,031,700

*Not included in totals.
District of Columbia is classed as a city and is not ranked with the States.

EPIDEMIOLOGIC NOTES AND REPORTS
BOTULISM AND IMPROPER HOME CANNING – California

Two cases of botulism were recently reported from Santa Clara County, California. On June 7 an elderly couple became ill with typical symptoms of botulism. The woman awoke on that day with nausea, vomiting, dizziness, headache, and abdominal cramps. In the next 48 hours she developed dry throat, progressive visual disturbance, ptosis, dysphagia, dysphonia, generalized weakness, difficulty walking, and a sensation of smothering. On admittance to a hospital on June 9, she was alert but had profound weakness of her proximal muscles, was short of breath, and aspirated on attempts to swallow. Her vital capacity diminished from 1100cc on admission to 600cc the next day, and blood gases showed hypercarbia and hypoxia. She underwent tracheostomy June 10 and received 4 vials of trivalent ABE botulin antitoxin after pretreatment serum was drawn. She is showing neurologic improvement, and respiratory assistance will be discontinued shortly.

Her husband had much milder disease. His symptoms, which developed later in the day on June 7, consisted of diplopia, slurred speech, and subjective generalized weakness. He experienced no gastrointestinal complaints or respiratory difficulty, and his vital capacity and blood gases remained normal. He was treated with 3 vials of trivalent antitoxin and discharged after 2 days.

The implicated food was a meat and vegetable soup served about noon on June 6. The husband reported that he

merely tasted the soup, while his wife had a whole bowlful. He said it had an "off taste" and was served warm, not hot. The ingredients included home-canned carrots. Tests at the State's Microbial Diseases Laboratory revealed type A botulin toxin in both the leftover soup and carrots. The woman's serum was also toxic to mice, but her husband's was not. The woman had home canned fruits and vegetables for years without apparent incident, although she never used a pressure cooker.

Editorial Note

The woman probably avoided botulism in the past by bringing foods to a complete boil before serving. The toxin responsible for botulism is readily destroyed by boiling, but spores of *C. botulinum* are not; thus to insure that all *C. botulinum* spores are destroyed, pressure cooking to a temperature of 116°C is recommended for certain foods.

(Reported by Charles I Leftwich, MD, and William C Drennan, MD, Private Physicians; Mary H Clark, MD, Deputy Director, Santa Clara County Health Department; Thaddeus F Midura, PhD, Research Microbiologist, Microbial Diseases Laboratory, and S Benson Werner, MD, Medical Epidemiologist, Infectious Disease Section, California State Department of Health.)

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Director, Center for Disease Control
 Director, Bureau of Epidemiology, CDC
 Editor, MMWR

David J. Sencer, M.D.
 Philip S. Brachman, M.D.
 Michael B. Gregg, M.D.

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.

In addition to the established procedures for reporting morbidity and mortality, the editor welcomes accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials.

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