



# MONTHLY MORBIDITY REPORT

Provisional Statistics

Reported Morbidity  
October, 1980

from  
EPIDEMIOLOGY UNIT AND PUBLIC HEALTH STATISTICS

## Trichinosis — United States, 1979\*

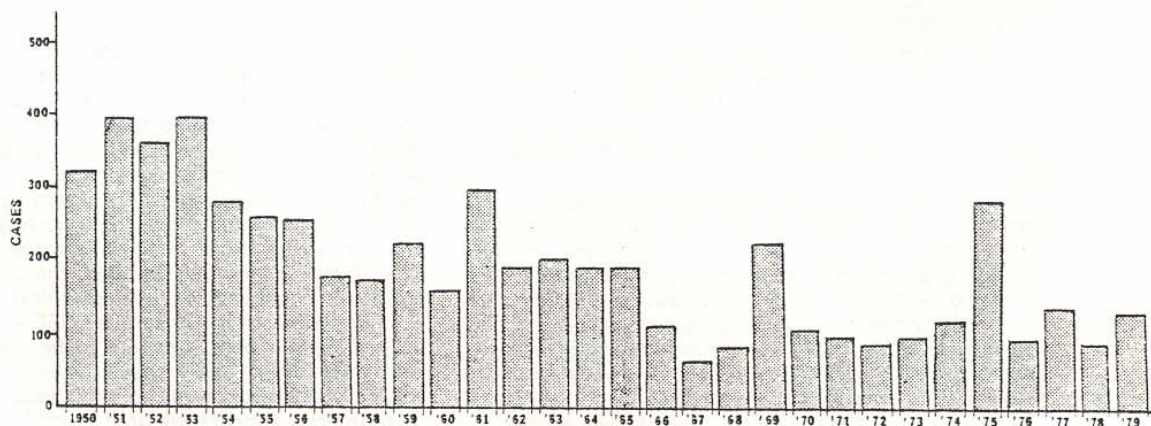
In 1979, 135 cases of trichinosis were reported to CDC for the United States. One patient, an 82-year-old Laotian immigrant, died. This was the first reported death due to trichinosis since 1975.

Trichinosis became a reportable disease in 1947, when the mean annual incidence was well above 300 cases. The number of cases reported annually declined from 1950 until 1966, when the number of cases recorded appeared to reach a plateau (Figure 1). During the last decade an annual mean of less than 150 cases was reported. Years of high incidence such as 1969 and 1975 were associated with the occurrence of an unusually large number of common-source outbreaks. In 1979 there were 21 common-source outbreaks, which accounted for 93 (69%) of the total cases.

Since 1947, 7213 cases of trichinosis have been reported in the United States. In the same period, 129 deaths were reported, for a case-fatality ratio of 17.9 per 1,000. For the 15 years 1947 - 1961, the case-fatality ratio was 22.7 per 1,000, whereas in the subsequent 15 years, 1962-1976, it was 10.4 per 1,000.

This long-term decline in the incidence of trichinosis in humans is also reflected in a declining prevalence of the disease. A comparison of the results of 2 surveys, in which human diaphragm samples obtained at autopsy (1) were examined, showed that an estimated 12% of the American population was infected with trichinae in 1940 (2,3) compared with 2.2% in 1970 (4,5). Similarly obtained estimates of the prevalence of live

FIGURE 1. Reported trichinosis cases, United States, 1950 - 1979



\* Reprint from MMWR 29:40, 1980 pp 481-4

TABLE 1. Trichinosis cases by source of infection, United States, 1979

FOOD	CASES
Pork products from domestic swine	
Sausage	67
Pork chops	7
Other preparation	14
Unspecified	5
Subtotal	93
Nonpork products	
Walrus meat	26
Bear meat	2
Ground beef	5
Subtotal	33
Unknown	9
Subtotal	9
TOTAL	135

*Trichinella spiralis* indicated that 7.3% of Americans had live organisms in their diaphragms in 1940 compared with 0.7% in 1970.

The decline in the prevalence of trichinosis in humans paralleled a similar decrease in the infection in swine. The prevalence of *T. spiralis* infection in farm-raised hogs, which comprise about 90% of marketed hogs, declined from 9.5 infected animals per 1,000 in the 1930's (6) to 1.3 per 1,000 in the period 1966 - 1970 (7). The rate for garbage-fed swine similarly decreased from 110 per 1,000 in 1950 to 5.1 per 1,000 in 1966 - 1970.

Of the 1979 trichinosis cases, there were 73 cases in males and 62 cases in females. As in previous years the age distribution of cases was similar for both sexes. The ages of patients ranged from 1 to 82 years, with a mean of 35.3 years. The mean age of male patients was 34.0 years and that of female patients was 36.8 years.

In previous years the only consistent seasonal pattern in the occurrence of this disease in the United States has been a peak in December and January, often related to common-source outbreaks associated with homemade pork sausage prepared for the Christmas holidays. Such a pattern was not apparent in 1979. That year, the monthly incidence peaked in March, coinciding with a common-source outbreak in Louisiana involving 20 cases (8).

The types of meat products incriminated as the source of trichinosis in 1979 are summarized in Table 1. In 126 cases the probable source of infection was identified; pork products from domestic swine were incriminated in 93 (73.8%). Of 88 cases where the type of domestic pork product was specified,

67 (76.1%) involved sausage.

Of 112 cases for which the method of cooking of the incriminated meat was reported, 85 (75.9%) indicated that the meat was not cooked. Samples of the meat items believed responsible for 39 cases were examined by investigators for the presence of *T. spiralis*, and larvae were identified in 13 (33.3%).

Reported by participating State Epidemiologist; Parasitic Serology Br, Parasitology Div, Bur of Laboratories, and Parasitic Diseases Div, Bur of Epidemiology, CDC.

**Editorial Note:** While adequate curing of sausage destroys *Trichinella* larvae, making further preparation of the meat unnecessary, small processors and householders who prepare their own sausage are not always aware of established standards for the proper curing and cooking of pork products. Furthermore, the stamp "U.S. Inspected and Passed" on raw pork products does not guarantee that the product is free from infective *Trichinella* larvae. The stamp simply signifies that the product was processed in accordance with specifications of the U.S. Department of Agriculture (USDA), but these do not require pork products to be inspected for *Trichinella* larvae. USDA specifications, however, do require that "ready-to-eat" pork products be heated to an internal temperature of at least 137 F (58.3 C), which is sufficient to kill *Trichinella* larvae. For maximum tenderness and flavor, with a minimum amount of cooking loss, the National Pork Producers Council recommends that pork roast be cooked to an internal temperature of 170 F.

# REFERENCE

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# **SELECTED REPORTABLE DISEASES** (By Place of Residence)

STATE AND PARISH TOTALS	VACCINE PREVENTABLE DISEASES					ASEPTIC MENINGITIS	HEPATITIS A AND UNSPECIFIED	HEPATITIS B	LEGIONNAIRES DISEASE	MALARIA**	MENINGOCOCCAL INFECTIONS	SHIGELLOSIS	TUBERCULOSIS, PULMONARY	TYPHOID FEVER	OTHER SALMONELLOSIS	UNDERNUTRITION SEVERE	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY	RABIES IN ANIMALS (PARISH TOTALS CUMULATIVE, 1980)
	MEASLES	RUBELLA*	MUMPS	PERTUSSIS	TETANUS														
Reported Morbidity October, 1980																			
TOTAL TO DATE 1979	257	31	31	18	3	97	639	222	4	6	117	104	450	5	161	9	19272	928	26
TOTAL TO DATE 1980	12	12	68	34	5	74	759	258	5	42	83	208	414	2	164	7	19640	1175	14
TOTAL THIS MONTH	1	2	0	2	0	12	103	31	0	0	13	18	47	1	44	0	2272	180	1
ACADIA							2	1					3				17		
ALLEN																	3		
ASCENSION																	8	1	
ASSUMPTION																	3		
AVOUELLES																	15	2	1
BEAUREGARD																	4	2	
BIENVILLE								1									2		2
BOSSIER							2	1					1				27	1	
CADDO	1					1	2	1			2	6	3		15		178	3	4
CALCASIEU							2	2					1				136	4	
CALDWELL																	6		
CAMERON																	1		
CATAHOULA							1										5		
CLAIBORNE							1								1		6		1
CONCORDIA																	5		
DESO				1							2	1			2		2		
EAST BATON ROUGE							2				1		4	1			216	33	
EAST CARROLL							1										9		
EAST FELICIANA																	2	2	1
EVANGELINE							4										2		
FRANKLIN													2				4		
GRANT													2				5	2	
IBERIA								1					2				28	4	
IBERVILLE																	10	5	
JACKSON															1				
JEFFERSON				1		2	14	4			2	2	1		2		116	13	
JEFFERSON DAVIS							6	2				2	2		1		16		
LAFAYETTE								1			1						43	6	
LAFORCHE												1					8		
LASALLE													1						
LINCOLN		1					8						1				41	2	
LIVINGSTON							1										1	2	
MADISON													1				12	1	
MOREHOUSE													1				29		
NATCHITOCHES							1	1			1	1					1		
ORLEANS		1				4	12	11			1	1	12		3		891	63	
OUACHITA							14	1					1		2		122	7	
PLAQUEMINES																	4		
POINTE COUPEE													1				1		
RAPIDES						1	2						1		2		80	3	
RED RIVER												1							1
RICHLAND						1							1				8		
SABINE																	1	2	
ST. BERNARD						1	3						1		1		5		
ST. CHARLES								1									18		
ST. HELENA																	3		
ST. JAMES							1										3	1	
ST. JOHN												1					4	1	
ST. LANDRY							3	1					1		2		12	3	
ST. MARTIN							2						1				7	3	
ST. MARY							2						1						
ST. TAMMANY							2						1		1		37	1	
TANGIPAHOA							1				1				1		18	2	
TENSAS																	1		
TERREBONNE						2	5	1				3			4		14		
UNION													1				5	1	
VERMILION							2				1				1		3		
VERNON													1				12	3	
WASHINGTON							5				1						9	3	
WEBSTER													1		3		18		4
WEST BATON ROUGE																	9	1	
WEST CARROLL																	6		
WEST FELICIANA							2	1							2		2	1	
WINN																	7		
OUT OF STATE																	11	2	

\* Includes Rubella, Congenital Syndrome.

\*\* Acquired outside United States unless otherwise stated.

4

From January 1, 1980, through October 31, 1980, the following cases were also reported: 7 - Leptospirosis; 4 - Brucellosis; 1 - Blastomycosis; 1 - Cryptococcosis; 27 - Trichinosis; 1 - Poliomyelitis, non-paralytic; 3 - Rocky Mountain Spotted Fever; 12 - Encephalitis, Arthropod-Borne.

Department of Health and Human Resources  
Office of Health Services and Environmental Quality  
P.O. Box 60630, New Orleans, La. 70160



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