

Summary of *Salmonella* serotype Enteritidis Outbreaks Reported to the CDC in 1999

As of March 1, 2000, 44 confirmed outbreaks of *Salmonella* serotype Enteritidis were reported in 1999, affecting U.S. residents in 17 states (Table). Of the 1,080 ill persons, 63 (6%) were hospitalized, and none died. Although the total number of SE outbreaks reported in 1999 is similar to the number reported in 1998, there were approximately twice as many illnesses. The median number of cases per outbreak was 15 in 1999.

Of the 19 outbreaks in 1999 for which a vehicle could be confirmed, 15 (79%) were associated with shell eggs; implicated vehicles included lasagna, ice cream, tira misu, stuffing, and manicotti. Between 1993 and 1998, an average of 82% of vehicle-confirmed outbreaks have been egg-associated.

Twenty-two (50%) of the 44 outbreaks occurred in commercial food establishments (e.g., restaurants, delis, bakeries, caterers), compared with 198 (63%) between 1993 and 1998 (Table). Six (14%) outbreaks occurred in college campuses or schools (e.g., preschools, elementary schools), compared with 3% from 1993 to 1998. Two (5%) of outbreaks occurred in nursing homes in 1999, compared with 5% from 1993 to 1998.

SE phage type 4 continued to emerge, causing an increase in sporadic illness in the western United States. Of the 37 outbreaks for which an isolate was submitted to CDC for phage typing, 18 (49 %) were caused by SE PT 4 (Table). Of these, 14 (78%) occurred in California, two in Utah, and one each in Hawaii and Virginia. Although most outbreak investigations and studies of sporadic illness due to SE phage type 4 in the United States have implicated eggs, in Europe SE phage type 4 is also transmitted by eating chicken. In the United States in 1999, two vehicle-confirmed outbreaks and one outbreak in which the vehicle was suspected but not confirmed were associated with eating chicken.

Phage type 8 accounted for 4 (11%) of the 37 SE outbreaks in 1999 for which isolates were submitted; of these, 2 occurred in eastern states with the other two occurring in Wisconsin and Michigan. Phage type 13a caused 4 (11%) of the SE outbreaks, and phage type 2, rare in the United States, was responsible for 4 (11%) outbreaks.

While the number of SE outbreaks in the New England and Mid-Atlantic states decreased from 42 in 1992 to 9 in 1999, the number reported by the Mountain and Pacific states increased from 3 in 1992 to 22 in 1999. Although the precise reason for the decrease in the northeastern states is unclear, it may be a combination of increased participation in egg quality assurance programs on farms, improvements in egg preparation practices, and food handler education.

SALMONELLA SEROTYPE ENTERITIDIS OUTBREAKS REPORTED TO CDC, BY DATE OF FIRST ONSET OF ILLNESS, JANUARY 1 - DECEMBER 31, 1999

Updated May 8, 2000

CDC ID	ONSET MONTH	STATE	CITY OR COUNTY	CASES	HOSP		DEATHS	EXPOSURE LOCATION	VEHICLE		SHELL EGGS?	PHAGE TYPE
					()	()			SUSPECTED VEHICLE	CONTAIN CONFIRMED ? ¹		
1	1	CA	LONG BEACH	33	6	0	0	RESTAURANT	FRIED RICE	N	Y	4
2	1	CA	LOS ANGELES	3	0	0	0	RESTAURANT	EGG DISHES	N	Y	4
3	1	CA	LOS ANGELES	2	1	0	0	RESTAURANT	CHILE RELLENO	N	Y	4
4	4	MD DE	Wicomico/Caroline Suffolk/Kent	65 4	3 0	0 0	0	Catered events	Chicken salad/ham	Y	N	13/13a (ham)
5	4	PA	Scranton	18	1	0	0	Bus trip	Eggs	N	Y	8
6	5	MA	Danvers	26	-	0	0	Luncheon	Manicotti	Y	Y	13
7	5	SD	Charles Mix Co.	2	0	0	0	Home	Unknown	N	-	-
8	5	MO	Camden Co.	39	2	0	0	Church	Meringue pies	N	Y	13a
9	5	VA	Newport News	13	0	0	0	Restaurant	Sliced fruit	N	N	4
10	6	HI	Honolulu	40	-	0	0	Community	Eggs	Y	Y	4
11	6	VA	Henrico Co.	177	8	0	0	Restaurant	Eggs/french toast	Y	Y	2
12	6	NY	Nassau Co.	25	2	0	0	Catered events	Tira misu	Y	Y	-
13	6	UT	Salt Lake Co.	64	0	0	0	Picnic	Ice cream	Y	Y	4
14	6	NJ	Morris Co.	2	0	0	0	Restaurant	Unknown	N	-	34
15	7	NJ	Monmouth Co.	16	0	0	0	Restaurant	Tira misu	Y	Y	13a
16	7	WI	Washington Co.	5	3	0	0	Assisted living	Eggs	N	Y	8
17	7	WI	Portage Co.	4	2	0	0	Institution	Unknown	N	N	-
18	7	CA	Los Angeles	29	0	0	0	Campus cafeteria	Egg dishes	Y	Y	4
19	7	CA	Los Angeles	82	3	0	0	Campus cafeteria	Salad bar items	Y	N	4

20	7	CA	Santa Barbara	33	0	0	Cafeteria	Eggs/salad Bar	N	Y	4
21	7	SC	Charleston	9	3	0	Restaurant	Crab cakes	N	Y	2
22	7	CA	Santa Barbara	3	0	0	Extended care home	Eggs/food handlers	N	Y	4
23	7	CA	Orange Co.	6	2	0	Bakery	Pastries	Y	Y	4
24	8	NC	Mecklenberg Co.	13	4	0	Restaurant	Lasagna	Y	Y	2
25	8	UT	Carlton, NV	5	0	0	Prison kitchen	Eggs	N	Y	4
26	8	OH	Marion	23	-	0	Festival	Baked beans	Y	N	13a
27	8	NY	New York City	9	-	0	Party	Cheese blintz	Y	Y	8
28	8	CA	San Joaquin	30	0	0	Cruise ship	Ship food	N	Y	4
29	9	CT	Middlesex	4	1	0	Restaurant	Eggs	N	Y	RDNC
30	9	MI	Kent Co.	13	6	0	Restaurant	Unknown	N	-	8
31	9	CA	Los Angeles	34	1	0	College campus	Unknown	N	-	4
32	10	CA	Los Angeles	2	1	0	Restaurant	Sushi	N	-	4
33	11	WI	Kenosha Co.	31	0	0	Catered events	Lasagna/ravioli	Y	Y	13a
34	11	PA	Reinholds	16	4	0	Private home	Stuffing	Y	Y	2
35	11	UT	Salt Lake Co.	3	0	0	Private home	Homemade ice cream	N	Y	-
36	11	CA	San Francisco	6	0	0	Private home	Chinese burrito	N	Y	-
37	11	CA	Los Angeles	7	0	0	Private home	Chicken dish	N	-	4
38	12	MA	Plainville	20	-	0	Catered events	Lasagna	Y	Y	23
39	12	UT	Salt Lake Co.	35	0	0	School	Unknown	N	-	-
40	12	UT	Salt Lake Co.	2	0	0	Private home	Homemade ice cream	N	Y	-
41	12	SC	Charleston	18	0	0	Cafeteria	Quiche	N	Y	RDNC
42	12	CA	Multiple	98	12	0	Community	Chicken	Y	N	4
43	12	CA	Long Beach	10	0	0	Private home	Lasagna	Y	Y	4
44	12	CA	San Diego	14	0	0	Cafeteria	Chile relleno	Y	Y	1
Total	44			1080	60	0					

"-" indicates missing or unknown data

¹ Based on reliable epidemiologic information, statistical implication, or SE isolation from remaining food samples

RDNC = Reacted, but did not conform (various phage lysis patterns)