

Summary of *Salmonella* serotype Enteritidis Outbreak Reported in 2002

In 2002, 29 outbreaks of *Salmonella* serotype Enteritidis (SE) were reported to the Centers for Disease Control and Prevention (CDC) from state and local health departments. These outbreaks resulted in 840 reported illnesses, 52 hospitalizations, and no deaths among residents of 23 states (Table). Compared with 2001, there were 17 fewer outbreaks, 50 fewer hospitalizations, and 841 fewer illnesses. The median number of cases per outbreak was 8 in 2002, compared with 10 in 2001.

A suspected food vehicle was identified for 17 (59%) of 29 outbreaks; 6 of these were confirmed by culture or statistical association. Eggs were an ingredient in 3 (50%) of 6 outbreaks with confirmed vehicles, which were homemade ice cream, eggs, and celery stuffing. In addition, eggs were an ingredient in two (18%) of 11 outbreaks in which the suspected food item was not confirmed.

Twenty (69%) of the 29 outbreaks occurred in commercial food establishments (e.g., restaurants, delicatessens, bakeries, caterers). Seven (24%) outbreaks took place in the general community (e.g., private homes, community centers, private clubs, churches), 1 (3%) occurred in a nursing home, and 1 (3%) occurred in an unidentified place.

Egg traceback investigations were conducted for 4 (80%) of 5 outbreaks in which a suspected or confirmed vehicle contained eggs. Two egg traceback investigations were conducted by state officials, and two were conducted by The Food and Drug Administration (FDA). One (25%) of the traceback investigations identified a single farm as the likely source of implicated eggs. SE was isolated from the environment. Information for the other traceback investigations was not available.

Phage typing was performed on patient isolates in 19 (66%) outbreaks. SE phage type 8 accounted for 8 (42%) of the outbreaks; most of these occurred in the Midwest or New England states. An egg-containing food vehicle was confirmed in 1 of the SE phage type 8 outbreaks. Phage type 13 caused 4 (21%) of SE outbreaks, and phage type 13a was responsible for 3 (16%) of SE outbreaks. Three uncommon phage types caused three outbreaks linked to beef (phage type 30) and unknown food items (phage types 22 and 23). Phage type 913, historically rare in the United States, has been linked to an outbreak caused by mung bean sprouts.

The number of SE outbreaks reported for the New England and Mid-Atlantic states decreased slightly from 12 in 2001 to 10 in 2002, a number considerably lower than the 42 outbreaks reported from that part of the country in 1992. The number of SE outbreaks reported in the Mountain and Pacific states decreased from 6 in 2001 to 4 in 2002. Although the proportion of confirmed vehicle and confirmed vehicle containing eggs outbreaks has decreased compared with previous years, eggs continue to be the most common vehicle identified. The reasons for the decrease are not known, but may include increased participation in egg quality assurance programs on farms, improvements in egg preparation practices, and food handler education. Communication among state health departments, CDC, and FDA is necessary to report the number of SE infections and outbreaks, and to assist in reducing SE infections.

Salmonella serotype Enteritidis outbreaks reported to CDC, by date of onset, January 1 - December 31, 2002 (as of 02/23/2003)

CDC ID #	Onset Month	State	City or County	Cases #	Hosp #	Deaths #	Exposure Location	Phage type	Suspected Vehicle	Vehicle Confirmed? ¹	Vehicle Contain Shell Eggs?	Egg Traceback Done ²	SE Isolated From Farm? ³
1	1	IL	Kankakee	22	2	0	Restaurant	13A	Unknown	N	-	-	-
2	1	IL	St. Clair	4	0	0	Restaurant	13	Unknown	-	-	-	-
3	1	ME	York	7	0	0	Community	913	Mung bean sprouts	Y	N	N	-
4	2	CT	Hartford	3	0	0	Nursing home	-	Unknown	-	-	-	-
5	2	MI	Malcom	2	8	0	Bakery	8	Cannoli (Pastry filling)	N	Y	-	-
6	3	ML ⁴	Dallas	300	4	0	Hotel	8	Salsa	Y	N	-	-
7	4	MN	Dakota	2	0	0	Chinese buffet	13	Unknown	N	-	-	-
8	4	MN	Olmsted	5	2	0	Private home	8	Fried rice	-	-	-	-
9	4	WI	Milwaukee	44	1	0	Restaurant	8	Chicken parmesan	Y	N	-	-
10	4	OR	Benton	2	0	0	Restaurant	-	Chicken	-	-	-	-
11	4	PA	Philadelphia	2	1	0	Restaurant	13	Mixed meat lasagna	-	-	-	-
12	5	MA	Hampshire	10	1	0	Restaurant	8	Unknown	N	N	-	-
13	5	IL	Lake	8	0	0	Private club	-	Unknown	-	-	-	-
14	6	PA	Lancaster	3	0	0	Restaurant	-	Chicken	-	-	-	-
15	6	NY	Monroe	47	7	0	Banquet facility	-	Multiple foods	-	-	-	-
16	6	NC	Robeson	23	4	0	Unknown	23	Unknown	-	-	-	-
17	7	WI	Washington	4	2	0	Restaurant	-	Unknown	-	-	-	-
18	7	MD	Wicomico	8	2	0	Restaurant	-	Unknown	-	-	-	-
19	7	MD	Baltimore	3	1	0	Restaurant	-	Unknown	-	-	-	-
20	7	PA	York	6	0	0	Seafood facility	8	Seafood	-	-	-	-
21	7	NY	Monroe	97	0	0	Golf club	-	Unknown	-	-	-	-
22	8	KY	Campbell	11	0	0	Church	13A	Homemade ice cream	Y	Y	Y:FDA	NA
23	8	NC	Wake	4	0	0	Restaurant	22	Unknown	-	-	-	-
24	8	IA	Cherokee	28	7	0	Restaurant	-	Potatoes, mashed w/gravy	-	-	-	-
25	9	VA	Richmond	32	2	0	Restaurant	13	Salad	N	N	-	-
26	11	OH	Putnam	27	4	0	Restaurant	13A	Celery stuffing	Y	Y	Y:Local	Y
27	11	ID	Ada	14	2	0	Restaurant	8	Eggs, french toast	N	Y	Y:Local	NA
28	12	WA	Multiple	32	0	0	Community	8	Eggs	Y	Y	Y:FDA	NA
29	12	CA	Merced	90	2	0	Private home	30	Beef	-	-	-	-
Total 29				840	52	0							

"-" indicates missing or unknown

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

² Indication of egg traceback: Traceback done by FDA - Y:FDA, done by State Agriculture Department - Y:Local

³ NA = not available

⁴ Multistate outbreak involving TX, CT, ID, MI, WA, MN, AR, FL, SD, CA, and MA, onset in March related to salsa dish served during conferences held in a hotel, Dallas, TX