

Center for Science in the Public Interest Foodborne Illness Outbreak Data 1999-2008

Table 1. All Foods with More Than 5 Outbreaks (FDA and USDA, 1999-2008)

| Foods | Outbreaks | Cases | Etiology #1 (outbreaks) (cases) | Etiology #2 / #3 (outbreaks) |
|-------------------------------|--------------|-----------------|---------------------------------------|---|
| Beverages | N=21 | N=1257 | | |
| Juice and cider | 21 | 1257 | Salmonella (5) (658) | Other Chemicals/Toxins (5) / Norovirus (4), E. coli (4) |
| Breads and Bakery | N=91 | N=1957 | | |
| Cake | 59 | 1452 | Norovirus (46) (1248) | Salmonella (5) / Other Chemicals/Toxins (3) |
| Breads | 32 | 505 | Norovirus (20) (352) | Salmonella (6) |
| Dairy | N=191 | N=4306 | | |
| Unpasteurized milk & cheese | 76 | 1517 | Campylobacter (53) (871) | E. coli O157:H7 (11) / Salmonella (6) |
| Cheese | 43 | 916 | Norovirus (21) (378) | Salmonella (10) |
| Ice cream | 42 | 717 | Salmonella (20) (306) | Norovirus (10) |
| Other dairy | 30 | 1156 | | |
| Eggs | N=110 | N=3084 | | |
| Eggs and egg dishes | 110 | 3084 | Salmonella (99) (2837) | Staphylococcus (5) / Norovirus (4) |
| Produce | N=538 | N=20,901 | | |
| Greens-based salad | 288 | 8385 | Norovirus (224) (7257) | E. coli (15) ; Salmonella (14) |
| Tomatoes | 35 | 3081 | Salmonella (18) (1812) | Norovirus (8) |
| Lettuce | 61 | 1900 | Norovirus (35) (1145) | E. coli O157:H7 (14) / Salmonella (4) |
| Melon | 36 | 1855 | Salmonella (21) (1284) | Norovirus (13) |
| Chili peppers | 11 | 1715 | Clostridium (6) (86) | Salmonella (2) |
| Fruit salad and mixed fruits | 43 | 1595 | Norovirus (35) (1434) | Salmonella (5) |
| Sprouts | 25 | 762 | Salmonella (19) (708) | E. coli (5) |
| Salsa | 39 | 1608 | Norovirus (14) (274) | Salmonella (11) |
| Multi-ingredient Foods | N=188 | N=4500 | | |
| Potato salad | 43 | 1772 | Norovirus (19) (1342) | Salmonella (5), Staphylococcus (5) |
| Beans, legumes | 67 | 1372 | Clostridium (35) (835) | Bacillus (12) / Salmonella (9) |
| Pasta salad | 20 | 412 | Norovirus (11) (318) | Salmonella (2) / Staphylococcus (1), Clostridium (1) |
| Coleslaw | 23 | 579 | Norovirus (13) (521) | Staphylococcus (3) / Bacillus (2), Salmonella (2) |
| Fried rice | 35 | 365 | Bacillus (26) (188) | Salmonella (4) / Staphylococcus (3) |
| Seafood | N=581 | N=3710 | | |
| Finfish, including tuna | 461 | 2066 | Scombrototoxin/Histamine (270) (1200) | Ciguatoxin (128) |
| Oysters | 98 | 1253 | Norovirus (57) (682) | Vibrio (30) |
| Other shellfish | 22 | 391 | Other Chemicals/Toxins (11)(45) | Vibrio (4) (10) |
| Beef | N=435 | N=9986 | | |
| Other beef and beef dishes | 258 | 7245 | Clostridium (107) (3561) | Norovirus (34); Salmonella (32) |
| Ground beef | 177 | 2741 | E. coli (94) (1398) | Norovirus (22) / Clostridium (20) |
| Poultry | N=514 | N=12,980 | | |
| Chicken and chicken dishes | 380 | 7567 | Salmonella (115) (2148) | Norovirus (73) / Clostridium (68) |
| Turkey | 134 | 5413 | Clostridium (41) (2429) | Salmonella (40) / Norovirus (31) |
| Pork | N=196 | N=4757 | | |
| Pork and pork dishes | 196 | 4757 | Staphylococcus (55) (1477) | Salmonella (49) / Clostridium (34) |
| Luncheon/Other Meats | N=26 | N=861 | | |
| Luncheon meat | 26 | 861 | Norovirus (11) (388) | Salmonella (7) /Listeria (5) |

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Table 2. Whole Food Categories with More Than 5 Outbreaks (FDA, 1999-2008)

| Foods | Outbreaks | Cases | Etiology #1 (outbreaks) | Etiology #2 / #3(outbreaks) |
|-----------------------|------------------|---------------|--------------------------------|---|
| Eggs and egg dishes | 110 | 3084 | Salmonella (99) | Staphylococcus (5) / Norovirus (4) |
| Tomatoes | 35 | 3081 | Salmonella (18) | Norovirus (8) |
| Dairy (pasteurized) | 115 | 2789 | Norovirus (42) | Salmonella (35) |
| Finfish | 461 | 2066 | Scombrototoxin/Histamine (270) | Ciguatoxin (128) |
| Lettuce | 61 | 1900 | Norovirus (35) | E. coli O157:H7 (14) / Salmonella (4) |
| Melon | 36 | 1855 | Salmonella (21) | Norovirus (13) |
| Chili peppers | 11 | 1715 | Clostridium (6) | Salmonella (2) |
| Shellfish | 120 | 1644 | Norovirus (58) | Vibrio (34) |
| Dairy (unpasteurized) | 76 | 1517 | Campylobacter (53) | E. coli O157:H7 (11) / Salmonella (6) |
| Beans, legumes | 67 | 1372 | Clostridium (35) | Bacillus (12) / Salmonella (9) |
| Juice and cider | 21 | 1257 | Salmonella (5) | Other Chemicals/Toxins (5) / Norovirus (4), E. coli (4) |
| Sprouts | 25 | 762 | Salmonella (19) | E. coli (5) |
| Total | 1138 | 23,042 | | |

Table 3. Important Mixed Foods (FDA, 1999-2008)

| Foods | Outbreaks | Cases | Etiology #1 (outbreaks) | Etiology #2 / #3(outbreaks) |
|------------------------------|------------------|--------------|--------------------------------|--|
| Greens-based salad | 288 | 8385 | Norovirus (224) | E. coli (15) / Salmonella (14) |
| Potato salad | 43 | 1772 | Norovirus (19) | Salmonella (5), Staph. (5) / Shigella (4), Norovirus (4) |
| Salsa | 39 | 1608 | Norovirus (14) | Salmonella (11) |
| Fruit salad and mixed fruits | 43 | 1595 | Norovirus (35) | Salmonella (5) |
| Cake | 59 | 1452 | Norovirus (46) | Salmonella (5) / Other Chemicals/Toxins (3) |
| Pasta salad | 20 | 412 | Norovirus (11) | Salmonella (2) / Staphylococcus (1), Clostridium (1) |
| Coleslaw | 23 | 579 | Norovirus (13) | Staphylococcus (3) / Bacillus (2), Salmonella (2) |
| Breads | 32 | 505 | Norovirus (20) | Salmonella (6) |
| Fried rice | 35 | 365 | Bacillus (26) | Salmonella (4) / Staphylococcus (3) |
| Total | 582 | 16673 | | |

Table 4. Foods with 5 or Fewer Outbreaks (FDA, 1999-2008)

| Foods | Outbreaks | Cases | Etiology #1 (outbreaks) | Etiology #2 (outbreaks) |
|---------------|------------------|--------------|--------------------------------|--------------------------------|
| Peanut butter | 4 | 1161 | Salmonella (3) | Norovirus (1) |
| Scallions | 5 | 967 | Hepatitis A (5) | |
| Corn | 2 | 927 | Clostridium (1), Norovirus (1) | |
| Hummus | 3 | 830 | Salmonella (2) | Norovirus (1) |
| Basil | 4 | 672 | Cyclospora (2) | Shigella (1), Salmonella (1) |
| Total | 18 | 4557 | | |

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Table 5. Listing of All Foods with More Than 5 Outbreaks (FDA and USDA, 1999-2008)

| Foods | Outbreaks | Cases | Etiology #1 (outbreaks) | Etiology #2 / #3(outbreaks) |
|------------------------------|------------------|---------------|--------------------------------|---------------------------------------|
| Greens-based salad | 288 | 8385 | Norovirus (224) | E. coli (15) / Salmonella (14) |
| Chicken and chicken dishes | 380 | 7567 | Salmonella (115) | Norovirus (73) / Clostridium (68) |
| Other beef and beef dishes | 258 | 7245 | Clostridium (107) | Norovirus (34) / Salmonella (32) |
| Turkey | 134 | 5413 | Clostridium (41) | Salmonella (40) / Norovirus (31) |
| Pork and pork dishes | 196 | 4757 | Staphylococcus (55) | Salmonella (49) / Clostridium (34) |
| Eggs and egg dishes | 110 | 3084 | Salmonella (99) | Staphylococcus (5) |
| Tomatoes | 35 | 3081 | Salmonella (18) | Norovirus (8) |
| Ground beef | 177 | 2741 | E. coli (94) | Norovirus (22) |
| Lettuce | 61 | 1900 | Norovirus (35) | E. coli O157:H7 (14) |
| Melon | 36 | 1855 | Salmonella (21) | Norovirus (13) |
| Potato salad | 43 | 1772 | Norovirus (19) | Salmonella (5), Staphylococcus (5) |
| Chili peppers | 11 | 1715 | Clostridium (6) | Salmonella (2) |
| Salsa | 39 | 1608 | Norovirus (14) | Salmonella (11) |
| Fruit salad and mixed fruits | 43 | 1595 | Norovirus (35) | Salmonella (5) |
| Unpasteurized dairy | 76 | 1517 | Campylobacter (53) | E. coli O157:H7 (11) / Salmonella (6) |
| Cake | 59 | 1452 | Norovirus (46) | Salmonella (5) |
| Finfish, minus tuna | 299 | 1433 | Scombrototoxin/Histamine (127) | Ciguatoxin (117) |
| Beans, legumes | 67 | 1372 | Clostridium (35) | Bacillus (12) / Salmonella (9) |
| Juice and cider | 21 | 1257 | Salmonella (5) | Other Chemicals/Toxins (5) |
| Oysters | 98 | 1253 | Norovirus (58) | Vibrio (30) |
| Pasta salad | 20 | 412 | Norovirus (11) | Salmonella (2) |
| Cheese | 43 | 916 | Norovirus (21) | Salmonella (9) / Listeria (2) |
| Luncheon meat | 26 | 861 | Norovirus (11) | Salmonella (7) / Listeria (5) |
| Sprouts | 25 | 762 | Salmonella (19) | E. coli (5) |
| Ice cream | 42 | 717 | Salmonella (20) | Norovirus (10) |
| Fresh tuna | 162 | 633 | Scombrototoxin/Histamine (143) | Ciguatoxin (11) |
| Coleslaw | 23 | 579 | Norovirus (13) | Staphylococcus (3) |
| Breads | 32 | 505 | Norovirus (20) | Salmonella (6) |
| Fried rice | 35 | 365 | Bacillus (26) | Salmonella (4) |
| Total | 2839 | 66,752 | | |

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Table 6. Produce-related Outbreaks (1999-2008)

| Foods | Outbreaks | Cases | Etiology #1 (outbreaks) | Etiology #2 / #3(outbreaks) |
|------------------------------|------------------|--------------|--------------------------------|--|
| Greens-based salad | 288 | 8385 | Norovirus (224) | E. coli (15) / Salmonella (14) |
| Tomatoes | 35 | 3081 | Salmonella (18) | Norovirus (8) |
| Lettuce | 61 | 1900 | Norovirus (35) | E. coli O157:H7 (14) / Salmonella (4) |
| Melon | 36 | 1855 | Salmonella (21) | Norovirus (13) |
| Potato salad | 43 | 1772 | Norovirus (19) | Salmonella (5), Staph. (5) / Shigella (4), Norovirus (4) |
| Chili peppers | 11 | 1715 | Clostridium (6) | Salmonella (2) |
| Salsa | 39 | 1608 | Norovirus (14) | Salmonella (11) |
| Fruit salad and mixed fruits | 43 | 1595 | Norovirus (35) | Salmonella (5) |
| Beans, legumes | 67 | 1372 | Clostridium (35) | Bacillus (12) / Salmonella (9) |
| Juice and cider | 21 | 1257 | Salmonella (5) | Other Chemicals/Toxins (5) / Norovirus (4), E. coli (4) |
| Sprouts | 25 | 762 | Salmonella (19) | E. coli (5) |
| Coleslaw | 23 | 579 | Norovirus (13) | Staphylococcus (3) / Bacillus (2), Salmonella (2) |
| Scallions | 5 | 967 | Hepatitis A (5) | |
| Corn | 2 | 927 | Clostridium (1), Norovirus (1) | |
| Basil | 4 | 672 | Cyclospora (2) | Shigella (1), Salmonella (1) |
| Total | 703 | 28447 | | |

Data is from the CSPI Outbreak Alert! database, which is searchable online at <http://www.cspinet.org/foodsafety/outbreak/pathogen.php>

Methodology related to the CSPI Outbreak Alert! database was published in: Caroline Smith Dewaal, Giselle Hicks, Kristina Barlow, Lucy Alderton, and Leora Vegosen. 2006. Foods Associated with Foodborne Illness Outbreaks from 1990 through 2003. Food Protection Trends, Vol. 26, No. 7, Pages 466-473.