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## **Salmonella Enteritidis outbreak linked to raw almonds**

On May 12, 2004, the Oregon Department of Human Services State Health Division identified five cases of *Salmonella* serotype Enteritidis (SE) infections with isolates having indistinguishable pulsed-field gel electrophoresis (PFGE) patterns. In the five days before illness, all patients had consumed raw almonds produced by Paramount Farms and sold under the Kirkland Signature label through Costco stores. The link between illness and consumption of raw almonds was a statistically significant finding when patients were compared with other persons in the community.

A review of recent SE isolates submitted to PulseNet, the National Molecular Subtyping Network for Foodborne Disease Surveillance, revealed 17 additional isolates from 9 states, for a total of 22 SE isolates with the outbreak-associated PFGE pattern (Alaska 1, Arizona 2, Idaho 2, Massachusetts 1, Michigan 3, Oregon 6, Tennessee 1, Utah 2, Washington 4). Ages of case-patients range from 11 months to 91 years with illness onset dates from June 2003 to April 2004. Of sixteen patients with known medical data, 5 were hospitalized and no one died. SE isolates from 2004 continue to be analyzed and case finding is ongoing.

Of the 18 patients interviewed to date, seventeen give a history of consuming raw almonds within a few days before illness onset. The remaining case is an infant who was likely infected by secondary transmission within the household.

On the evening of May 18, at the request of the Food and Drug Administration (FDA), Paramount Farms issued a recall of whole natural raw almonds sold under the Kirkland Signature, Trader Joe's, and Sunkist brands. Recalled raw almonds from the Kirkland Signature brand, available exclusively at Costco Wholesale Inc. and sold in 3-pound bags, have "best before" dates of 8/21/04 through 2/8/05. Recalled almonds from the Trader Joe's and Sunkist brands have "best before" dates of 8/21/04 through 3/15/05. Details regarding the recall can be found at [http://www.fda.gov/oc/po/firmrecalls/paramount05\\_04.html](http://www.fda.gov/oc/po/firmrecalls/paramount05_04.html). The distribution of these almonds is considered to be nationwide.

Each year approximately 40,000 cases of salmonellosis are reported in the United States. Because many milder cases are not diagnosed or reported, the actual number of infections is much greater. Symptoms of infection with *Salmonella* include diarrhea, abdominal cramps, and fever, usually within 8-72 hours after being exposed. The illness usually lasts 4 to 7 days, and most people recover without antibiotic treatment. The elderly, infants, and those with impaired immune systems are at greater risk for severe infections. *Salmonella* is usually transmitted to patients through the consumption of foods contaminated with animal feces.

Clinicians should report cases to local or state health departments, who will inform the Foodborne and Diarrheal Diseases Branch at CDC. For questions please contact your state health department or the Foodborne and Diarrheal Diseases Branch, CDC (404) 639-2206.

For more information about Salmonella Enteritidis: [http://www.cdc.gov/ncidod/dbmd/diseaseinfo/salment\\_g.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/salment_g.htm)

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**DEPARTMENT OF HEALTH AND HUMAN SERVICES**