



Questions and Answers: Sprouts and *Salmonella* Saintpaul

Is there an outbreak of *Salmonella* infection linked to alfalfa sprouts?

Yes. People in several states have become sick from *Salmonella* Saintpaul, a bacterium that causes diarrhea, vomiting and, in some especially vulnerable people, more serious illnesses. Interviews with people who have become ill, conducted by state and local health departments and the Centers for Disease Control and Prevention (CDC), show that many of them had eaten raw alfalfa sprouts or products that contained raw alfalfa sprouts before becoming sick. Clinical tests of those who became sick reveal that they were all infected by *Salmonella* Saintpaul bacteria that share a common genetic fingerprint. This suggests that the bacteria were likely to have come from the same food source.

Are any alfalfa sprouts or products containing alfalfa sprouts being removed from the market?

Yes. FDA, CDC, and state and local health departments worked together to trace the illnesses to contaminated alfalfa seeds imported from a firm in Italy. The cooperation of the U.S. sprout industry was essential to the success of this investigation. The U.S. distributor of the seeds, Caudill Seed Company, is voluntarily withdrawing the seeds from the market. The Caudill Seed Company seed lots that are potentially contaminated begin with "032" and are followed by a hyphen and three more digits.

Should I stop eating alfalfa sprouts?

FDA has no evidence that alfalfa seeds from other seed lots, or sprouts grown from them, are involved in this salmonellosis outbreak. However, if you plan to buy alfalfa seeds or buy or eat products that contain raw or lightly cooked alfalfa sprouts, including sprout blends, ask your retailer to verify that the product did *not* originally come from a seed lot beginning with the numbers "032." If your retailer says that the product originated from a seed lot starting with "032," avoid it.

If your retailer cannot verify the source of the alfalfa seeds, alfalfa sprouts, or sprout blends containing alfalfa sprouts, FDA recommends that you avoid them, at this time.

An important note: Consumers should ask their retailers about the seed lot number, rather than looking for the numbers on packages themselves. Numbers found on packages in stores do not reflect the seed lots from which the product was grown. Therefore, the absence of a number starting with "032" on a package of alfalfa sprouts sold at the retail level is not a reliable indicator that the sprouts are not associated with the implicated seeds.

The FDA and CDC recommend that people who are especially vulnerable to infection – very young children, elderly people, and people with diseases that weaken the immune system or who are taking medications for an over-active immune system (like some medications for rheumatoid arthritis) – *always avoid* raw and lightly cooked sprouts of any kind and any products that contain them.

How many people are known to have become sick during this outbreak?

The recent illnesses are a continuation of an outbreak that began earlier this year. The outbreak is believed to have begun in February 2009 and appeared to have been subsiding by mid-March. However, rather than tapering off at that point, illnesses continued to be reported weekly. Though the reported illnesses were occurring at a lower rate than seen originally, they continued to occur. As of May 5, 2009, a total of 232 illnesses stemming from *Salmonella* Saintpaul infection and associated with consumption of alfalfa sprouts have been reported. Approximately 1 out of every 10 people reported to have become ill required hospitalization. No deaths have been reported. Because some illnesses are not reported, the number of infected people is likely to be higher than the official count.

Which states have reported illnesses?

To date, there have been confirmed cases in Florida, Illinois, Iowa, Kansas, Maryland, Michigan, Minnesota, Nebraska, Ohio, Pennsylvania, South Dakota, Utah, Virginia, and West Virginia. However, since the implicated seeds were widely distributed and the outbreak is on-going, it is possible illnesses will be reported by individuals in other states.

I've eaten alfalfa sprouts recently. How can I tell if I'm sick from *Salmonella* Saintpaul?

Most people infected with *Salmonella* develop diarrhea (sometimes bloody), vomiting, fever, and abdominal cramps within 12 to 72 hours after infection. Illness ranges from mild to severe. The illness usually lasts 4 to 7 days, and most people recover without treatment.

However, salmonella infection can cause more serious illness or death in people with weak immune systems; for example, very young children, elderly people, people with diseases that weaken the immune system, people who

are taking medications for an over-active immune system (like some medications for rheumatoid arthritis), or people undergoing chemotherapy. Severe *Salmonella* infections can spread from the intestines to the bloodstream and to other organs and become life-threatening. *The FDA and CDC recommend that people in these high-risk groups always avoid all types of raw or lightly cooked sprouts and any products that contain them.*

If you are experiencing the symptoms listed above, see your health professional.

Have other outbreaks occurred from sprouts?

Yes. Since 1996, there have been 30 reported outbreaks of foodborne illness for which contaminated sprouts were implicated as the cause. These outbreaks resulted in about 1,800 cases of illness caused by the bacterial pathogens *Salmonella* species and *E. coli* O157.

In 1999 FDA issued guidance for the sprout industry on how to reduce the risk that their products will become a vehicle for transmitting harmful bacteria and making people sick. The experience over the past decade has shown that the risk of sprouts being contaminated with *Salmonella* and other bacteria can be lowered if the industry follows these recommendations consistently and properly.

Following release of the sprout guidance, the number of outbreaks associated with the consumption of sprouts, and the number of illnesses in an outbreak, appeared to decline. There were no reported outbreaks associated with sprouts in 2005, 2006, or 2007. In late 2008, however, there was one *Salmonella* outbreak associated with sprouts.

This current outbreak is one of two outbreaks in 2009 tied to raw sprouts. The other outbreak was associated with another bacterium, *Listeria monocytogenes*.

Where did the alfalfa sprouts that are thought to be making people sick come from?

The sprouts were grown by multiple sprouters across the country. The seeds originally came from Italy. The seeds were initially distributed in 50-pound white bags that are either paper or woven from a synthetic material. The lot numbers in question begin with "032," followed by a hyphen and three more digits. The bags carry a computer-generated white or yellow label, on which is printed "Distributed by Caudill Seed Company, 1402 W. Main St., Louisville KY 40203" and the lot number.

Are any other sprouts associated with this outbreak?

At this time, other types of sprouts have not been implicated in this outbreak. Likewise, alfalfa sprouts that were *not* grown from seeds that came from seed lots beginning with the number "032" are *not* implicated in the outbreak.

Does FDA have any other advice for consumers?

If you cannot verify that your alfalfa seeds or sprouts are not from the implicated lots, you should avoid handling them (in addition to not eating them). Handling contaminated products can contaminate your hands, which then can contaminate other foods, utensils, sinks, and countertops.

Washing fruits and vegetables routinely can help you avoid illness, but cannot be counted on to completely remove bacteria. When a specific product is found to be linked to an outbreak, washing cannot be relied on to make that product safe. If you already have raw alfalfa sprouts or products containing raw alfalfa sprouts in your home and cannot verify the lot numbers they came from, throw them away without touching them bare-handed, in a place where other people and pets won't have contact with them, and clean and disinfect the areas they touched.

Are Home-Grown Sprouts Safe?

Homegrown alfalfa sprouts grown from seeds that came from seed lots beginning with "032" are potentially contaminated. If your seeds are from one of these seed lots or if you cannot verify that they are not from one of these seed lots, you should minimize your handling of the seed and any sprouts grown from them, and throw them out.

What is FDA's advice for retailers and food-service facilities?

Retailers, restaurateurs, and personnel at other food-service facilities should ask their suppliers to verify that the alfalfa sprouts or seeds being provided do not come from an affected lot before buying or serving them. Suppliers who can verify that their products were not sourced from the affected lots may wish to notify their customers. Likewise, retailers, restaurateurs, and food-service facilities who have verified the sources of their alfalfa products may wish to notify their customers.

What is FDA's advice for sprout growers?

FDA reminds sprout growers to be vigilant in their food-safety practices and strongly encourages them to follow FDA's Sprout Guidance, which is available on the FDA website, at <http://www.cfsan.fda.gov/~dms/sproug1.html>. As noted, experience over the past decade has shown that following recommendations from this Sprout Guidance can enhance the safety of sprouts. The United Fresh Produce Association also has advised the seed and sprout industry to follow FDA's guidance on sprouts.

How did federal and state health officials link this foodborne illness outbreak to raw alfalfa sprouts?

Interviews conducted with people who became sick from the outbreak strain of *Salmonella* Saintpaul showed that many had eaten alfalfa sprouts. The association was strong. Investigations traced contaminated raw alfalfa sprouts to several sprout growers in multiple states, and ultimately implicated seeds from an Italian firm.

How does FDA find out that an outbreak is underway?

FDA works with its federal, state, and local public health partner agencies to identify disease outbreaks. State health departments report certain illnesses, including illnesses from *Salmonella*, to CDC. They establish the genetic fingerprint of bacteria from samples provided by patients. Sometimes the genetic fingerprints, together, show a pattern that suggests that an outbreak may be starting. A surge in infections from bacteria that are found to share the same genetic fingerprint (more so than usually occurs) often is a signal that an outbreak stemming from a common source – a food, for example – has started.

CDC, working with the states, determines whether there was a common food that the people who became sick had eaten, and notifies FDA if it is a food for which FDA has regulatory authority. FDA then can begin tracing these foods back through the food-supply chain, to look for the point (or points) where the foods may have been contaminated, so that further illness can be prevented.

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