

**ALERT #3 - EPI Update, July 31st, 2013 – ALERT #3**  
**Center for Acute Disease Epidemiology (CADE)**  
**Iowa Department of Public Health (IDPH)**

***Iowa Cyclospora* Outbreak Investigation Update**

**Investigation Findings**

Epidemiological data and food history interviews implicate a pre-packaged salad mix as the source of the *Cyclospora* outbreak in both Iowa and Nebraska. The pre-packaged salad mix contains iceberg and romaine lettuce, as well as carrots and red cabbage. Exposure to this pre-packaged salad mix was identified in approximately 80 percent of the cases interviewed. **It is recommended that Iowans continue eating salads, as the implicated pre-packaged salad mix is no longer in the state's food supply chain.** Iowa will continue to work closely with other states, the Centers for Disease Control and Prevention, and the FDA as the investigation moves forward.

**Summary of the Investigation**

IDPH, in cooperation with the Iowa Department of Inspections and Appeals (DIA), local public health officials, and the CDC and FDA, has been investigating what has become a national *Cyclospora* outbreak for several weeks. Iowa continues to have the most cases reported in the multi-state outbreak, with 145 cases reported as of today. The number of new cases being reported continues to decline.

Interviews with ill individuals and food trace back investigations have led to the identification of a pre-packaged salad mixture as the source of Iowa's outbreak. More than 80 percent of Iowa's cases reported eating the same pre-packaged salad mix that contained iceberg and romaine lettuce, red cabbage, and carrots. The mixture came into Iowa already packaged and already contaminated. The process that led to the implication of the pre-packaged salad mixture as the outbreak source is a good illustration of how public health investigations work.

As cases began to be reported to IDPH in late June, epidemiologists interviewed those who were ill to determine what and where they had eaten. As an example of the complexity of this investigation, over 100 restaurants and 80 grocery stores were patronized by cases during the time they could have been exposed to *Cyclospora*. Exposures to pre-packaged salad mix could have occurred at more than 50 possible sites (including more than 15 restaurants, more than 30 grocery stores and other possible sites).

Since *Cyclospora* has historically been associated with contaminated fresh fruits and vegetables, these exposures were looked at very closely. It was quickly determined there were no fruit or fruit products in common and IDPH informed the public a vegetable was likely the source. As the public health investigation progressed, detailed interviews were performed where clusters of cases occurred. These cluster investigations further implicated a specific type of prepackaged salad mixture (that included iceberg lettuce, romaine lettuce, red cabbage, and carrots). The DIA investigation continued in parallel and began to point to a specific prepackaged salad mix. Further investigation determined the salad mixture came from the same origin, even though exposures occurred at various locations. DIA was instrumental in determining that 80 percent of Iowa cases had been exposed to the specific pre-packaged salad mix. Once it was determined this was an interstate, and possibly international food product, FDA became involved.

IDPH has not released the name of the salad mixture brand, or locations where it was purchased or eaten because of confidentiality mandated by Iowa state law. Iowa Code Section 139A.3(2)'c' requires IDPH to prevent the identification of any business involved in a disease outbreak, and authorizes release of the identity of a business to the public only 'when the state epidemiologist or director of public health determines such a release of information is necessary for the protection of the public.' Because the vast majority of illnesses occurred in mid-June and the limited shelf life of fresh produce, IDPH and DIA determined the implicated salad mix was no longer in the Iowa food supply chain. Thus, there is no ongoing threat to the public health which would require the identification of a particular brand, store, or restaurant where the salad mixture was available. In addition, these sites could not have taken any action to prevent contamination of the mixture since it came pre-packaged and ready-to-eat.

If it had been determined the source of the outbreak was still in the food supply chain, or that a business was refusing to take some action necessary to protect the public's health, IDPH would inform Iowans about the exact product or source in order to protect their health. In such a case, a recall of the item would be facilitated by the FDA. Neither action was necessary in this outbreak.

**Updated Testing Criteria- Please use this beginning today**

On Monday, July 29th, 75 stools were tested for *Cyclospora* at the State Hygienic Laboratory (SHL) and two were found to be positive. This continues the trend of decreasing patients testing positive for *Cyclospora*. Because of this, IDPH and SHL are recommending that healthcare providers use the following criteria to determine whether *Cyclospora* testing of patients is appropriate. Patients should be tested for *Cyclospora* if:

- Patient's diarrhea began in June, or
- Patient has prolonged diarrhea for greater than 6 days duration (eliminating the more common causes of diarrheal illness), accompanied by symptoms such as fatigue and anorexia, or
- Patient is a traveler with watery diarrhea returning from part of the world where *cyclospora* is endemic (such as Nepal, Guatemala, or Peru).

When ordering an O&P (ova and parasite test), *Cyclospora* must be specifically ordered. Please submit specimens to SHL for testing.

For more information, visit: [www.idph.state.ia.us/Cade/DiseaseIndex.aspx?disease=Cyclospora](http://www.idph.state.ia.us/Cade/DiseaseIndex.aspx?disease=Cyclospora) or [www.cdc.gov/parasites/cyclosporiasis/](http://www.cdc.gov/parasites/cyclosporiasis/).

For the latest *Cyclospora* outbreak information, visit: <http://www.idph.state.ia.us/EHI/Issue.aspx?issue=CyclosporaOutbreakInvestigation>.

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