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## 2015's Local Foodborne Illness Outbreaks

Three confirmed outbreaks were associated with Boise food establishments in 2015. Suspect risk factors that contributed to these outbreaks were not surprising once the investigations were complete: Cross contamination of raw poultry to ready-to-eat foods, ill employees working, and raw uncooked product mixed with ready-to-eat ingredients.

### Cross Contamination and Cleaning Food Contact Surfaces

Cross contamination can be prevented when food contact surfaces are properly washed, rinsed and sanitized before contact with ready-to-eat food. Food contact surface cleaning and sanitizing procedures must be followed at all times and staff must know the reason for the procedures. Test strips are to be used to verify that the correct concentration of sanitizer is applied to food contact surfaces. Follow the chemical sanitizer instructions for proper use.

When a food contact surface is properly cleaned and sanitized prior to contact with ready-to-eat food, the transmission of harmful bacteria and virus is greatly reduced.

### Employee Illness Policy

All employees may have symptoms such as vomiting, diarrhea, fever and sore throat, or jaundice (yellowing of skin), and should be excluded from food preparation and service. An employee illness policy that requires reporting specific symptoms to the manager or person in charge is essential. An employee illness policy form for employees can be found at [cdhd.idaho.gov/EH/index.htm](http://cdhd.idaho.gov/EH/index.htm). Select "Food" and then "Food Safety Operational Tools." There, you will find an employee illness agreement form as a PDF document on the right side of the page.



WE'RE A



To protect the health of **everyone** at CDHD, no use of tobacco or vaping is allowed anywhere on our property.

Thank you for your cooperation.

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*Food Review is sent biannually, free of charge to all licensed food establishments in our health district. We hope to include news of interest and importance. Topic ideas or articles written by the readers are welcome to be sent to: Editor, Food Review, CDHD, 707 N. Armstrong Pl., Boise, ID 83704. Extra copies of the newsletter are available at your local Health Department office.*



# The 10 Biggest U.S. Foodborne Illness Outbreaks of 2015

BY LYDIA ZURAW | DECEMBER 29, 2015

PUBLISHED BY WWW.FOODSAFETYNEWS.COM

This year saw dozens of well-publicized foodborne illness outbreaks. While many of them were found to have sickened a handful of individuals, a few stood out as especially wide in scope. Food Safety News has compiled a list of the 10 most harmful U.S. outbreaks of 2015, in terms of both the number of people who died and the number sickened.\*

This list excludes *norovirus* outbreaks and only includes pathogenic outbreaks associated with grocery products or restaurants. Please also note that the actual number of outbreak cases is typically much higher than the quoted number due to many victims never reporting their illnesses.

**10. *E. coli* O26 from Chipotle, specific source unidentified, 52 sickened.** The fast casual chain was hit with six reported outbreaks, but it was the multistate *E. coli* outbreak which began in October that captured national attention.

**9. *Salmonella Paratyphi B variant L(+)* tartrate(+) and *Salmonella Weltevreden* Infections Linked to Frozen Raw Tuna, 65 sickened.** This outbreak — most prevalent on the West Coast — occurred between March and July and was believed

to be caused by contaminated frozen tuna imported from Indonesia and used to make sushi.

**8. *Salmonella* from pork carnitas sold at Supermercado Los Corrales, 70 sickened.**

The illnesses, reported to Kenosha County, WI health officials in May, were linked to pork carnitas sold at Supermercado Los Corrales during Mother's Day weekend. The meat and food preparation area of the store was temporarily closed during the investigation and reopened June 4.

**7. *Staphylococcus aureus* from the Sunnyside Child Care Center, 86 sickened.** After dozens of children were hospitalized in Alabama, state health officials found *Staphylococcus aureus* toxin in several food products served at both locations of the Sunnyside Child Care Center in Montgomery which matched with patient samples. The kitchen was closed for investigation and reopened after staff complied with all necessary training and operational requirements.

**6. *Salmonella* 4,[5],12:i:- and *Salmonella Infantis* from Pork, 192 sickened.** There were 188 *Salmonella* 4,[5],12:i:- illnesses

*Continued on page 3*

## Typhoid Fever Cluster Hits Colorado Restaurant

Three (3) cases of life-threatening typhoid fever were confirmed in Colorado in early November 2015. A local news outlet in Denver reported all three of the people sickened with the bacterial infection had eaten at a Qdoba Mexican Grill in Firestone in August 2015. Although the outbreak happened in August 2015, the three (3) illnesses were reported months later because incubation of the infection and diagnosis take time, said state epidemiologist Dr. Lisa Miller, from the Colorado Department of Public Health and Environment.

The infected customers came down with headaches, fever and other symptoms. "Two of these three people were actually hospitalized, so they were quite sick," Miller said. All the patients have now recovered, CBS Denver reported.

According to Miller, tests of employees showed the source of the illness was an infected food handler at the Qdoba who spread the *Salmonella [enterica\_serotype] Typhi* bacterium. **The employee reportedly showed no symptoms of illness.**

### How did it get into the food?

"Someone sheds it in their feces and contaminated food or directly contaminated something that somebody else ingests," Miller said.

*Continued on page 6*



## 10 Biggest Outbreaks

*Continued from page 2*

and 4 *Salmonella Infantis* illnesses in Washington, Oregon, Idaho, California and Alaska linked to pork produced by Kapowsin Meats. *Salmonella* I 4,[5],12:i:-isolates collected from patients were found to be multi-drug resistant. Thirty people were hospitalized and no deaths were reported.

**5. *Shigella* from Mariscos San Juan, 194 sickened.** The Santa Clara County Public Health Department reported on Nov. 9 that 194 people were sickened with *Shigella*. Nearly all of the cases reported that they ate at Mariscos San Juan restaurant on Oct. 16 or 17.

**4. *Salmonella Typhimurium* from Tarheel Q, 1 death and 280 sickened.** Those who fell ill after eating at the Lexington, NC barbeque restaurant came from 16 North Carolina counties and five states. Laboratory testing indicated that the BBQ sample and a sample from a patient who became ill during the beginning of the outbreak were both positive for *Salmonella*.

**3. *Salmonella* from the Boise Co-op, 290 sickened.** Approximately 290 people were sickened with *Salmonella* linked to food purchased from the Boise Co-op deli after June 1, 2015. Preliminary test results showed *Salmonella* growth in raw turkey, tomatoes and onion.

**2. *Cyclospora* from Mexican-grown cilantro, 546 sickened.** For the third year in a row, *Cyclospora*-contaminated cilantro grown in Mexico caused a massive outbreak. This year, there were 31

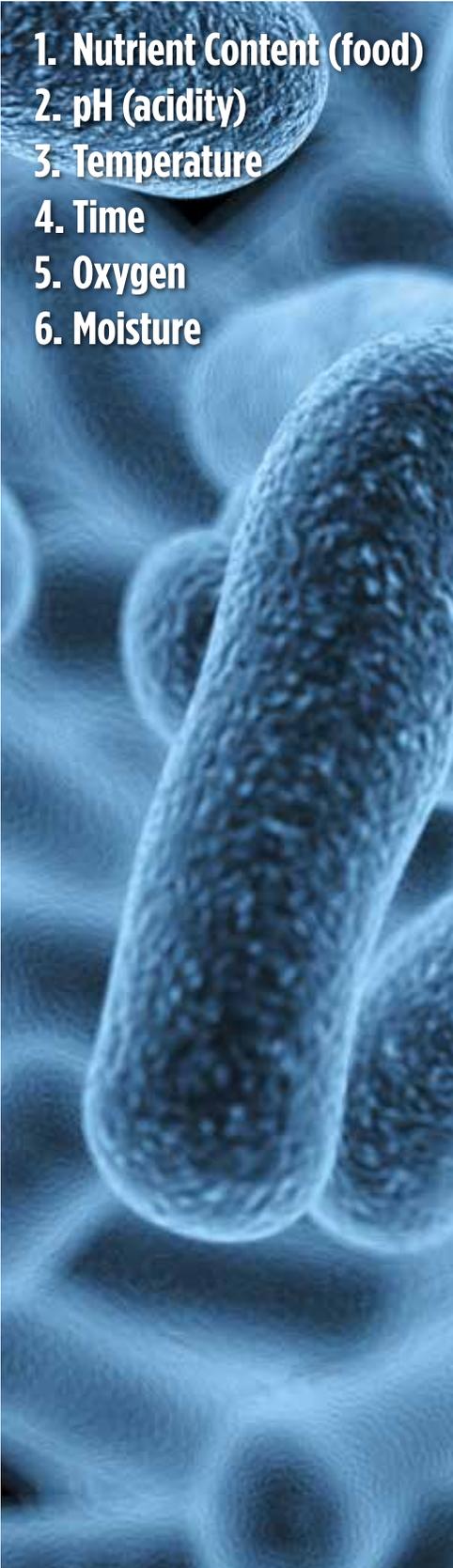
states affected but Texans bore the most with 179 illnesses. The bulk of the illnesses hit at the end of May and throughout June.

**1. *Salmonella Poona* from cucumbers, 4 deaths and 838 sickened.** This enormous outbreak hospitalized 165 people and four deaths were reported in Arizona, California, Oklahoma and Texas. The outbreak hit California the hardest where 232 people were sickened, but 38 states were affected in total. Investigators identified cucumbers imported from Mexico and distributed by Andrew & Williamson Fresh Produce as a likely source of the infections and there were two recalls of potentially contaminated cucumbers. The number of reported illnesses has declined substantially since the peak of illnesses in August and September, but it hasn't returned to the number of reported illnesses expected each month (about five).

\*We'd also like to mention the *Listeria* outbreak connected with Blue Bell Creameries. There were three deaths and 10 illnesses connected to the ice cream and reported as early as 2010. On April 20, 2015, Blue Bell recalled all of its products and began distributing its ice cream again at the end of August. Although the outbreak was fairly small and only one connected illness was reported in 2015, we thought it important to note on this list because of the unusual food product and the national coverage it sparked this year.



# Factors that Influence the Growth of Bacteria

- 
1. Nutrient Content (food)
  2. pH (acidity)
  3. Temperature
  4. Time
  5. Oxygen
  6. Moisture

## Nutrient Content

Bacteria need food and have a metabolism that allows survival and growth. These microorganisms require certain basic nutrients for growth and metabolic functions. Nutrients include water, a source of energy, nitrogen, protein, vitamins and minerals. Foodborne microorganisms can derive energy from carbohydrates, alcohols and amino acids. Varying amounts of these nutrients are present in foods that help bacteria grow.

## pH

Bacteria have a specific pH range that is best for growth. The range of pH for bacterial growth is different for the many types of harmful bacteria. To simplify, this is the measure of acidity in foods. The range of pH values is 0–14. Zero to 6 is acidic, 7 is neutral and 8–14 is basic. The Idaho Food Code describes a food with a pH value of less than 4.6 as being unfavorable for bacterial growth. Some microorganisms can survive at a pH of 4.2. Some foods that have a pH below 4.6 are whole tomatoes, orange juice, limes, grapes, and apples. It is important to wash fruits and vegetables because harmful bacteria can be on the outside.

## Temperature

Bacteria have specific temperature ranges that are best for their growth. The temperature danger zone that is prime for bacterial growth is 41°F to 135°F. When potentially hazardous food is in this temperature range, bacteria can grow and multiply quickly with time.

## Time in Danger Zone

Time is a crucial consideration. Pay attention to the time a product is in the temperature danger zone. When potentially hazardous food is in the temperature danger zone, time must be recorded and monitored to prevent harmful bacteria from growing and multiplying. The rule of thumb is that potentially hazardous food can be in the danger zone for a maximum of four (4) hours or less.

If potentially hazardous food is in the danger more than four (4) hours it must be discarded because harmful bacteria, if present, will grow rapidly.

## Oxygen

Some harmful bacteria require oxygen and some do not. *Salmonella*, *E. coli*, *C. jejuni*, *Bacillus cereus*, *S. aureus* and *Shigella* are some bacteria that use oxygen and cause foodborne illness. *Clostridium botulinum* is a bacteria that grows without oxygen. When the oxygen requirements for bacteria are in the optimum range, bacteria will grow when the other parameters are in their favor too.

## Moisture

Microorganisms need water in available form to grow in food products. The control of the moisture content in foods is one of the oldest preservation strategies. Food microbiologists generally describe the water requirements of microorganisms in terms of water activity.

Water activity is a measure of available water for bacteria. Bacteria need a minimum amount of water to grow that can be measured in a laboratory. The current Idaho Food Code describes food with a water activity value of 0.85 or less will not be favorable for the growth of bacteria. Some foods that have a low water activity value are fruit jams and jellies, jerky, parmesan cheese, honey, dried fruit, cereal and fruit cake.

## NOTE:

The best way to prevent growth of harmful bacteria in the food you serve is to monitor temperatures of food in refrigeration units including the upper compartments of prep units and making sure it is held at 41°F or below. **Keep cold food cold.**

Cooked foods must reach the proper cooking temperature to kill harmful bacteria and then held hot at 135°F or above. **Keep hot food hot** to prevent the growth of bacteria.



# Studies Look at Hand Hygiene Among Food Workers

The spread of germs from the hands of food workers to food is a significant cause of foodborne illness outbreaks in restaurants, according to a study of 154 foodborne illness outbreaks. In fact, **89 percent of outbreaks in the study were caused by food contaminated by food workers.\***

## How does this happen?

When a food worker who has been ill is still “shedding” a gastrointestinal virus with or without symptoms such as diarrhea, and inadequate hand washing occurs, coupled by bare hands used to prepare ready-to-eat food, cross contamination takes place. It is that simple.

**The Centers for Disease Control and Prevention (CDC) study found that food workers carried out about nine activities an hour that should have involved handwashing.**

**During the following activities, workers only washed their hands one quarter (27 percent) of the time:**

- **Before preparing food: 41%**
- **Before putting on gloves to prepare food: 30%**
- **After eating, drinking, using tobacco, coughing, sneezing, using tissue: 26%**
- **After preparing raw animal products: 23%**
- **After handling dirty equipment: 23%**
- **After touching body: 10%**

These rates suggest that workers either do not know when to wash their hands, or sometimes choose not to wash their hands.

**Handwashing rates were highest before food preparation,** suggesting that at least some workers know that food needs to be protected from dirty hands.

**Handwashing rates were lowest after workers touched their bodies** (for example, after scratching their noses). Workers may not know they need to wash their hands after touching their bodies, may think it takes too much time, or may simply be unaware of their behavior.

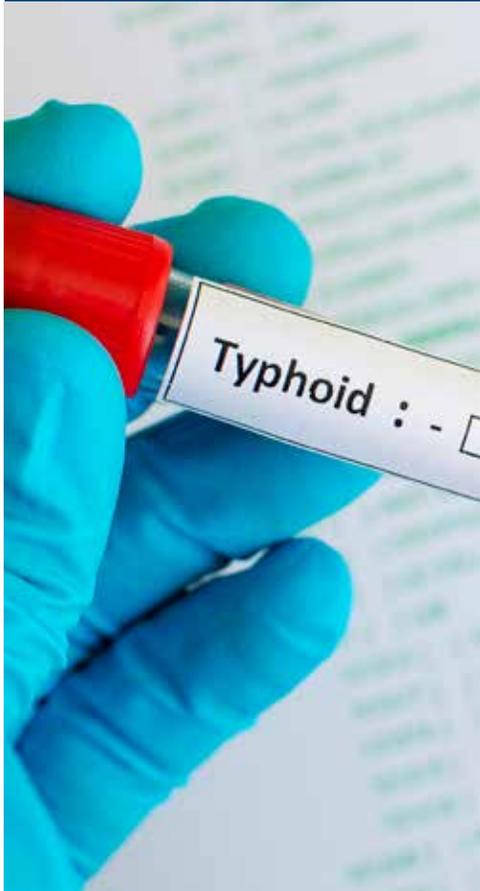
Glove wearing has its place, especially when done properly. For example, workers who wore gloves while preparing raw animal product were less likely to wash their hands when they were done, than workers who were not wearing gloves. This suggests that glove use may lead to less handwashing. However, in Idaho, a barrier such as tongs, gloves, or deli paper is required when preparing ready-to-eat food, and hand washing is required between glove changes.



## How can your business improve hand washing and reduce bare hand contact with food?

- **Review your restaurant’s practices and surroundings** to determine potential barriers to hand hygiene. Efforts to improve hand hygiene should address the factors impacting hand hygiene behavior.
- **Revise food-preparation activities** to lower the number of needed hand washings. A sandwich-making process could be revised to reduce the number of times a worker handles raw meat, lowering the number of hand washings needed and hopefully increase the odds that workers will wash their hands as needed.
- **Increase the number of hand sinks available** to food workers. Increase access to boxed gloves and observe glove use. Watch when employees are changing gloves and if hand washing is taking place between glove use changes. Using dirty hands to replace gloves contaminates new gloves. Observe when employees are changing gloves. Are employees changing gloves after activities like eating, drinking, using tobacco, coughing, sneezing, using tissue, preparing raw animal products, handling dirty equipment and kitchenware, touching the body, returning from a break and/or talking on or handling a telephone?

Talk to your health inspector and take the time to understand how cross contamination can occur in your facility so that you can reduce the odds of foodborne illness.



# When to Report Illness of a Food Service Employee

We'd like to congratulate food service operators for keeping the Health District informed when they have illness situations reported by customers or employees. Early intervention is the key to limiting outbreaks. Delayed reporting or interventions can allow the outbreak to spread and result in sick customers and adverse publicity. Below are some Frequently Asked illness-related questions.

**Q. Do I have to report employee illnesses to the Health District?**

**A. Yes.** If an employee has certain diagnosed illnesses or conditions in a communicable form, including diarrhea or vomiting, the person in charge of the eating or drinking establishment [or school or child care] must immediately notify the Health District and obtain guidance on proper actions needed to protect the public. The ill employee shall not work as a food handler as long as the disease is in a communicable stage.

The diseases and conditions include, but are not limited to:

- *Campylobacteriosis*
- Diarrhea
- *E. coli O157:H7*
- *Norovirus*
- Hepatitis A
- Skin infections
- Vomiting

**Q. During an outbreak investigation, do employees have to submit a stool (or other) specimen or submit to an examination?**

**A. Yes.** If the investigator has reasonable cause to believe the food handler is afflicted with a disease listed in the *Rules and Regulations Governing Idaho Reportable Diseases*. Visit this link for the Reportable Disease list: [www.cdhd.idaho.gov/CD/pros/reportingcd.htm](http://www.cdhd.idaho.gov/CD/pros/reportingcd.htm)

**Q. Will the employee be restricted from working?**

**A. Maybe.** Depending on the illness, the employee may be allowed to return to work when feeling well, or may be required to submit further specimens for testing. Each disease has its own restriction protocol.

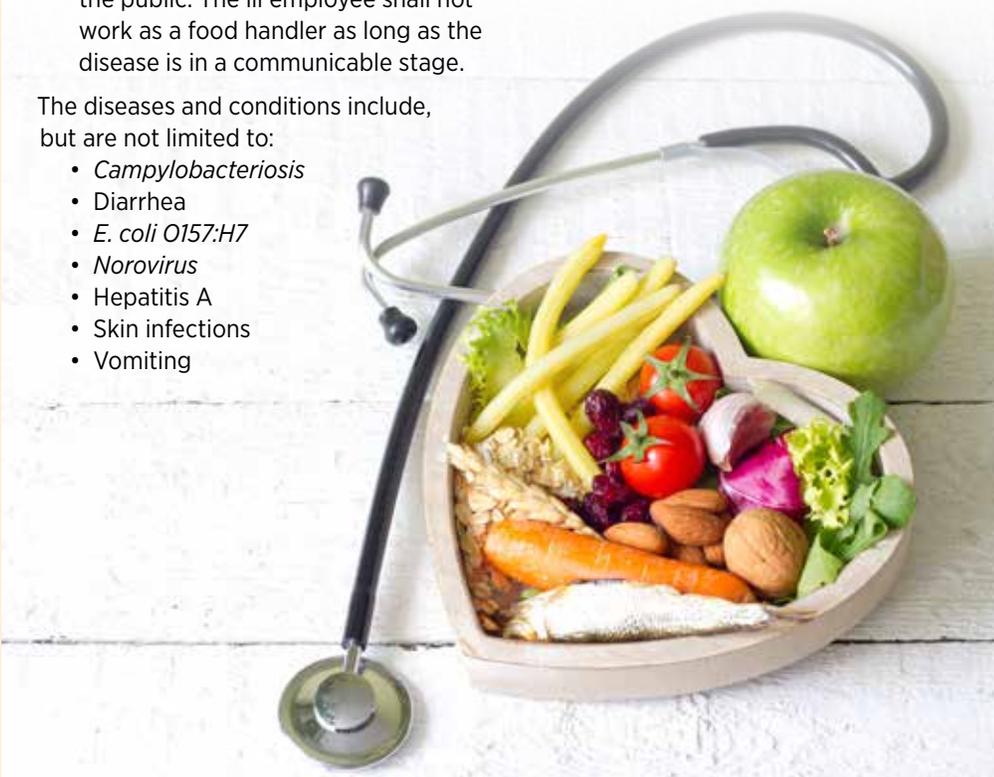
## Typhoid Fever

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Typhoid fever is rarely acquired in the USA and can be deadly. CDC [Centers for Disease Control and Prevention] says about 5,700 cases are reported in the USA each year, mostly in travelers who contracted the bacteria overseas. The disease is more common in developing countries, where it often spreads through contaminated food and water.

The illness is treated with antimicrobials, although some strains are becoming resistant. There is also a vaccine for typhoid fever which is recommended for some international travelers.

The interesting point is that the food service worker who was a carrier of the *Salmonella* bacteria did not show symptoms of illness. Good handwashing by all food service workers and practicing no bare hand contact with ready-to eat food, will reduce the chance of a foodborne illness in your food establishment.





# Food Safety Training

## Two Food Safety Certifications Offered Through Central District Health Department

2016 Training Opportunities

1

### Idaho Food Safety & Sanitation Course

- 4-hour classroom format | 8:30 a.m. to 12:30 p.m.
- Cost: \$48 per student
- Location: In Ada County - Central District Health Department, 707 N. Armstrong Pl., Boise
  - >> With 10 or more students, will travel to Boise, Elmore and Valley counties by appointment.

#### UPCOMING DATES:

- Wednesday, February 17
- Wednesday, March 16
- Wednesday, April 20
- Wednesday, May 18
- Wednesday, June 15

All classes are from **8:30 a.m. to 12:30 p.m.**

2

### National Restaurant Association's Serv-Safe Certification Course

- 8-hour classroom format | 8 a.m. to 5 p.m.
- Cost: \$125 per student
- Location: In Ada County - Central District Health Department, 707 N. Armstrong Pl., Boise
  - >> With 10 or more students, will travel to Boise, Elmore and Valley counties by appointment.

#### UPCOMING DATES:

- Wednesday, February 24
- Wednesday, March 23
- Thursday, April 21
- Wednesday, May 25
- Wednesday, June 22

All classes are from **8 a.m. to 5 p.m.**

**To register, call CDHD's Environmental Health Department at 208-327-7499**



## Central District Health Department

Environmental Health  
707 N. Armstrong Pl.  
Boise, ID 83704-0825



## Food Allergens are More Common than We Think!

Knowing the ingredients of the food you prepare and serve is very important for the customer who has food allergies. Read the labels. Federal law requires that the labels of most packaged foods marketed in the U.S. disclose when they are made

with a "major food allergen." Sometimes it might be best to bring the container with the ingredient label out to the customer and let them read the label for themselves and make a decision.

According to the Centers for Disease Control and Prevention (CDC) more than 12 million Americans have food allergies. That means one in 25 Americans has a food allergy, and the number increases in children under the age of 3, to approximately one in every 17 infants. CDC also notes that the prevalence of food allergies is on the rise.

Each year, millions of Americans have allergic reactions to food. Although most food allergies cause relatively mild and minor symptoms, some food allergies can cause severe reactions, and may even be life-

threatening. There is no cure for food allergies

A major food allergen is defined as one of the following foods or food groups, or is an ingredient that contains protein derived from one of the following foods or food groups:

Milk, eggs, peanuts, tree nuts such as almonds, walnuts, and pecans, soybeans, wheat, fish, and shellfish such as crab, lobster, and shrimp

These foods or food groups account for most food allergies in the United States.

The law allows manufacturers a choice in how they identify the specific "food source names," such as "milk," "cod," "shrimp," or "walnuts," of the major food allergens on the label.