

# Frequently Asked Questions: FOOD

## Frequently Asked Questions about CDC's Foodborne Outbreak Online Database (FOOD)

### What is FOODborne Outbreak Online Database?

The FOOD tool is a web-based platform for searching CDC's Foodborne Disease Outbreak Surveillance System database. FOOD provides access to national information and is intended to be used for limited descriptive summaries of outbreak data.

### Why did CDC develop FOOD?

Many people and organizations— consumer advocacy groups, public health workers, the medical community, the food industry, and the public—have questions about foodborne outbreaks in the United States. The questions can span a range of topics, depending on the questioner's specific interests or responsibilities. Sometimes people want to know how many outbreaks occurred in certain areas or over certain time periods, or what foods were associated with those outbreaks, or how many people got sick or were hospitalized or died. Our intention is to make CDC's foodborne outbreak surveillance data easily accessible.

### How can I access FOOD?

You can access FOOD at this link: <http://wwwn.cdc.gov/foodborneoutbreaks>

### What kind of data is available through FOOD?

FOOD lets you search and download data on foodborne disease outbreaks reported to CDC from 1998 through the most recent year of finalized data. Search fields include year, state (outbreaks occurring in more than one state are listed as "Multi-state outbreak reported by CDC"), where the food vehicle was consumed, and etiology (the pathogen, toxin, or chemical that caused the illnesses). More information on how these variables are determined is available online at: [http://www.cdc.gov/outbreaknet/references\\_resources/](http://www.cdc.gov/outbreaknet/references_resources/). The downloaded data includes additional fields--total illnesses, hospitalizations, deaths, reported food vehicle, pathogen species and serotype, and etiologic status (whether the etiology was confirmed or suspected). In many outbreak investigations, a specific food vehicle is not identified; for these outbreaks, the contaminated food vehicle is reported as "unknown."

### Why doesn't FOOD include outbreaks from before 1998?

CDC started its electronic reporting system for outbreaks in 1998 and also enhanced surveillance for outbreaks at the same time. FOOD includes outbreaks from the start of electronic reporting.

### Where do FOODborne disease outbreak data come from?

Data in FOOD come from CDC's national Foodborne Disease Outbreak Surveillance System database. Most foodborne outbreaks are investigated by the state, local, territorial, and tribal health departments where the outbreak occurs. Outbreak information is then reported to CDC by the public health agency that conducted the investigation. CDC is only directly involved in outbreak investigations that involve more than one state, or are particularly large, or when the state or local health department requests assistance. The public health agency conducting the outbreak investigation completes a detailed form and submits the form to CDC.

## Does FOOD give a complete picture of all foodborne disease outbreaks that have occurred in the United States?

FOOD includes data on all foodborne disease outbreaks reported to CDC since 1998. However, not all foodborne disease outbreaks are reported. Some outbreaks are never identified. Sometimes, an investigation is not conducted or the investigation is incomplete. Some outbreaks that are investigated might not be reported to CDC. In addition, FOOD contains data only from reports that are finalized, where the primary mode of transmission is foodborne, and the total number of ill persons is greater than one.

## Can you provide an example of how FOOD works?

Let's say you are a teacher in New York wanting to know how many norovirus outbreaks were reported in schools since 2003.

In the left-hand column, select the years of interest. To select a range of years, in this case, 2003-2009, hold down the ctrl key, and select years 2003 through 2009. In the next column, select the state of interest: New York. In the third column, select the location of interest, in this case 'School'. Next, select the etiology of interest, 'norovirus'. Click on the 'search' button to display the results on the screen, or the 'download' button to create an xml file to download a copy of the search results.

**Foodborne Outbreak Online Database (FOOD)**

**Choose search criteria**

Year	State	Location of Consumption	Etiology (Genus Only)
2002	New York	Restaurant - "Fast-food"(drive up service or pay at counter)	Norovirus
2003	North Carolina	Restaurant - other or unknown type	Other bacterial
2004	North Dakota	Restaurant - Sit-down dining	Other chemical
2005	Ohio	School	Other etiology
2006	Oklahoma	Unknown	Other natural toxins
2007	Oregon	Wedding reception	Other parasitic
2008	Pennsylvania	Workplace cafeteria	Other viral
2009	Puerto Rico	Workplace, not cafeteria	Paralytic shellfish poison

**Disclaimer:** This site was developed by the Centers for Disease Control and Prevention (CDC) to make Foodborne Disease Outbreak Surveillance System data more available to the public and stakeholders. The FOOD tool is intended to be used for limited and simple descriptive summary of outbreak data. Data obtained from this tool are an extract of reported data and therefore should not be considered completely representative of the findings in investigations of all outbreaks reported. CDC uses more detailed information for its analyses of the causes and risk factors of foodborne disease outbreaks. Please see the [FOOD FAQ](#) for more information and limitations of the data. Thank you for your interest in foodborne disease outbreaks.

**Table is populated based on the following criteria:** Years: 2003; 2004; 2005; 2006; 2007; 2008; 2009; States: New York; Location of Consumption: School; Etiology (Genus Only): Norovirus

Year	Month	State	Etiology			Location of Consumption	Total Ill	Total Hospitalization	Total Death	Food Vehicle	Contaminated Ingredient
			Genus Species	Serotype or Genotype	Etiology Status						
2004	June	New York	Norovirus		Suspected	11	0	0			
2004	October	New York	Norovirus		Suspected	97	3	0	egg salad/egg salad sandwich; pork, chops; potato, mashed	Eggs; Pork; Root	
2006	October	New York	Norovirus		Suspected	11	1	0			
2008	September	New York	Norovirus		Confirmed	9	0	0			
2009	April	New York	Norovirus		Confirmed	40	0	0	cheese, pre-sliced; deli meat, unspecified		

The results of this example are displayed above. Five norovirus outbreaks (two of which had a confirmed etiology) were reported between 2003 and 2009 that occurred in schools in New York. Additional variables included in the search results are the total numbers of illnesses, hospitalizations, and deaths, and the food vehicle(s) for the outbreaks in which food information was reported.

### **What is the difference between a “confirmed” and “suspected” etiology?**

An etiology is “suspected” unless it meets one of the criteria for confirming an outbreak etiology (available online at: [http://www.cdc.gov/outbreaknet/references\\_resources/guide\\_confirming\\_diagnosis.html](http://www.cdc.gov/outbreaknet/references_resources/guide_confirming_diagnosis.html)). For most etiologies, the organism or toxin needs to be identified in a clinical specimen, such as stool or blood, from 2 or more outbreak-related patients, or be recovered from the implicated food vehicle. If no clinical specimens or food samples are submitted for diagnostic testing, the etiology may be “suspected” based upon the clinical syndrome of ill persons, the implicated food, or other information. In addition, an etiology may be “suspected” because the number of ill persons was small, and only one clinical specimen was submitted for laboratory identification of the etiology. Epidemiologists investigating the outbreak are trained to make these determinations and report the reason an etiology is suspected.

### **What do you mean by a “multi-state” outbreak?**

A multi-state outbreak is defined as one in which exposures occurred in more than one state; an outbreak affecting residents from one than one state due to exposure in a single state is considered to be a single –state outbreak. A search for outbreaks for a specific state will return all single-state reported by that state and all multi-state outbreaks involving that state.

### **Why can’t I search on “food vehicle”?**

When you display or download the results of a FOOD search, food vehicles implicated in outbreak investigations are included. More than 8,000 food items have been reported as implicated vehicles to CDC’s Foodborne Disease Outbreak Surveillance System, and so searching on a single food name often doesn’t yield a clear picture of the outbreaks linked to that food. For example, outbreaks caused by “hamburger,” “hamburger sandwich,” “meatloaf,” and “steak” are all made of beef, but none of them would be identified by searching on the word “beef.” To categorize foods into more useful groups, CDC has developed a classification scheme that includes 17 commodities, such as “beef,” “eggs,” and “leafy vegetables,” and provides annual summaries of the outbreaks and illnesses attributed to these commodities ([http://www.cdc.gov/outbreaknet/surveillance\\_data.html](http://www.cdc.gov/outbreaknet/surveillance_data.html)).

### **How do changes in surveillance for foodborne disease outbreaks affect the data displayed in FOOD?**

In 2009, the foodborne disease outbreak reporting form was updated, including the addition of new variables and options for variables that were previously collected. For example, for the variable ‘location of consumption’, three new options were added to the possible choices: Restaurant – “Fast Food”, Restaurant – Sit-down dining, and Restaurant – other or unknown type. Because the form used before 2009 collected only ‘Restaurant of deli’ as a category, all outbreaks where location of consumption was ‘Restaurant of deli’ from 1998-2008 will be displayed ‘Restaurant – other or unknown’ in FOOD. Please contact the [FOOD-Tool@cdc.gov](mailto:FOOD-Tool@cdc.gov) if you have specific questions about how other variables might have changed.

### **What does the time stamp information on the downloaded data mean?**

The outbreak surveillance database is dynamic. Reporting agencies (state, local, territorial, and tribal health departments, and CDC) can modify their outbreak reports at any time, even months or years after an outbreak. Therefore, results from FOOD are subject to change. The date on which the searchable FOOD database was last updated is recorded in the “DateofTransfer” field in the downloaded file and in text on the web page.

### **Can I use this data for my thesis project or other in-depth analysis?**

No. Data obtained from FOOD are an extract of data and therefore might not completely represent the findings of all reported outbreak investigations. CDC uses more detailed information for its analyses of the causes and risk factors of foodborne disease outbreaks, such as contributing factor and symptoms data. Contact [FOOD-Tool@cdc.gov](mailto:FOOD-Tool@cdc.gov) to ask questions about FOOD data or to discuss submitting an application to request additional data.

### **What is the proper citation to reference FOOD?**

Centers for Disease Control and Prevention (CDC). Foodborne Outbreak Online Database. Atlanta, Georgia: U.S. Department of Health and Human Services, Center for Disease Control and Prevention. Available from URL: <http://www.cdc.gov/foodborneoutbreaks>. Accessed MM/DD/YYYY.

### **What is the format of the data file downloaded from FOOD?**

Files are downloaded from FOOD in xml format to allow use with multiple software programs. Downloaded xml files can be viewed directly in Access or Excel and can be read by analytical software such as SAS, SPSS, and STATA. Consult the software provider's customer support materials for directions on importing xml files into these or other software programs.

### **Why is data on the most recent year not yet available?**

It takes time for public health authorities to complete their outbreak investigations and then to report the results to CDC. Once outbreaks are reported, CDC reviews the reports for missing information in key data fields and works with state and local health departments to correct errors. FOOD will continue to be updated periodically as new outbreak information is reported and finalized by CDC.

### **What is CDC doing to control and prevent foodborne disease?**

CDC's mission is to use the best scientific information to monitor, investigate, control and prevent public health problems. Using the tools of epidemiology and laboratory science, CDC provides scientific assessment of public health threats. CDC works closely with state health departments to monitor the frequency of specific diseases and conducts national surveillance for them. CDC provides expert epidemiologic and microbiologic consultation to health departments and other federal agencies on a variety of public health issues, including foodborne disease, and it stations epidemiologists in some state health departments to help with surveillance and investigation of foodborne diseases. CDC can also send a team into the field to conduct emergency field investigations of large or unusual outbreaks, if needed by state public health officials. CDC researchers develop new methods for identifying, characterizing and fingerprinting the microbes that cause disease. We translate laboratory research into practical field methods that can be used by public health authorities in States and counties.

CDC is not a regulatory agency. Government regulation of food safety is carried out by the Food and Drug Administration (FDA), the U.S. Department of Agriculture (USDA), the National Marine Fisheries Service, and other regulatory agencies. CDC works closely with the regulatory agencies.

When new public health threats appear, CDC learns what they are and how they can be controlled through rapid scientific field and laboratory investigation. CDC shares the results of these investigations with the states, regulatory federal agencies, industry. Although we do not regulate the safety of food, CDC assesses the effectiveness of prevention efforts. We provide independent scientific assessment of what the problems are, how they can be controlled, and where gaps exist in our knowledge. You can find more information on foodborne illness and CDC's prevention activities at: <http://www.cdc.gov/foodsafety/>

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