



Foodborne Illness

American consumers have one of the safest food supplies in the world, yet foodborne pathogens are responsible for an estimated 5,000 deaths and 76 million illnesses each year. Despite the safety of the food supply, occasional outbreaks keep foodborne illness at the forefront of public awareness.

The identification this spring of tomato-borne *Salmonella* Saintpaul and the national news coverage that followed have generated public concern about food safety. Other recent incidents, like the 2006 *E. coli* O157 spinach contamination, the *salmonella* Tennessee peanut butter contamination in 2007, and pet food recall in the same year have maintained the public's focus on the problem and on what is being done to address it.



What national systems actively monitor foodborne illness?

The Foodborne Diseases Active Surveillance Network (FoodNet) is the principal foodborne disease component of CDC's Emerging Infections Program (EIP). It is a collaborative project of the CDC, ten EIP sites, the U.S. Department of Agriculture (USDA), and the Food and Drug Administration (FDA).

What distinguishes FoodNet from other surveillance programs, and thus makes it so important to the public health system is the fact that it is an "active" surveillance system. This means that public health officials frequently contact laboratory directors to find new cases of foodborne diseases and report these cases electronically to CDC. Additionally, the information collected by FoodNet is more complete than that from passive systems, which allows more accurate and precise estimates and interpretation of the burden of foodborne diseases over time.

What is the current incidence of foodborne illness?

TABLE 1. Number and Incidence* of laboratory-confirmed bacterial and parasitic infections in 2007, by site and pathogen, compared with national health objectives† - Foodborne Diseases Active Surveillance Network, United States

Pathogen	Number of cases	Incidence	National health objective†
Bacteria			
<i>Campylobacter</i>	5,816	12.78	12.30
<i>Listeria</i>	122	0.27	0.24
<i>Salmonella</i>	6,787	14.92	6.80
<i>Shigella</i>	2,848	6.26	N/A [§]
STEC [¶] O157	545	1.20	1.00
STEC non-O157	260	0.57	N/A
<i>Vibrio</i>	108	0.24	N/A
<i>Yersinia</i>	163	0.36	N/A
Parasites			
<i>Cryptosporidium</i>	1,216	2.67	N/A
<i>Cyclospora</i>	13	0.03	N/A
Surveillance population (millions)	45.50		

*Per 100,000 population
 †Healthy People 2010 objectives for incidence of *Campylobacter*, *Salmonella*, and Shiga toxin-producing *Escherichia coli* O157 infections for year 2010 and for incidence of *Listeria* infections for years 2005 and 2010
 §Not applicable because no national health objective exists for this pathogen
 ¶Shiga toxin-producing *Escherichia coli*.

The chart on the left shows the incidence of the nine common foodborne illnesses monitored by the FoodNet program in the 10 participating states.

The estimated annual incidence of all foodborne pathogens decreased significantly when compared to previous years, with the exception of *Cryptosporidium* and *Vibrio*.

The greatest area for improvement appears to be in reducing the incidence of *Salmonella* infection, which is twice the rate set by the Healthy People 2010 objective.

To learn more about the FoodNet program and the illnesses it monitors, and to access localized incidence data visit the FoodNet site at:

<http://www.cdc.gov/FoodNet/>

What steps are being taken nationally to protect the food supply?

The food market is changing rapidly—with food imports from around the world increasing, new food varieties being introduced, and new methods of food production and distribution emerging each year. To adapt to these changes and maintain food safety in a changing food supply, in 2007 the FDA unveiled its Food Protection Plan.

The Food Protection Plan uses a set of integrated strategies spanning each product's entire life cycle, from production to consumption. The three core elements of the plan are:

1. **Prevention:** This involves promoting corporate responsibility, reviewing food supply vulnerabilities, and developing and implementing risk reduction measures
2. **Intervention:** This includes inspections, sampling, and surveillance at high risk points in the food supply chain
3. **Response:** This element focuses on improving the FDA's emergency response efforts and better communication with federal, state, and local government agencies and industry.

In 2009, the USDA's Food Safety and Inspection Service plans to launch a Public Health Information System. The web-based system is intended to make food safety data collection, analysis, and reporting more efficient. To learn about the Food Protection Plan, visit:

<http://www.fda.gov/oc/initiatives/advance/food/plan.pdf>

How can you communicate effectively with the community during an outbreak?

You can make the best of the attention that an outbreak of foodborne illness brings by using it as an opportunity for community outreach and as a food safety "teachable moment"!

- To engage community members you can set up a health alert email sign-up, so that they can stay up to date on the latest outbreak developments. For an example check out Ledge Light Health District's at: http://www.ledgelighthd.org/disease_prev/PHA/PHAlerts_main.html
- For well-written, ready-to-use materials and resources on food safety that you can adapt for your community or direct community members to, check out the **Fight Bac website**. This campaign, developed by the Partnership for Food Safety Education, can be found at: <http://www.fightbac.org/>
- For community members who want comprehensive information on foodborne illness, the **FDA's "Bad Bug Book"** provides an overview of 40 of the most common foodborne pathogens. You can access it here: <http://www.cfsan.fda.gov/~mow/intro.html>



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