Welcome!
Please dial in to the audio portion:
(800) 658-3095
Access Code: 964856914#
Today’s Speakers

- Jennifer Schleman, APR  
  Director, Public Outreach and Online Communications  
  International Food Information Council Foundation

- Tony Flood  
  Director, Food Safety Communications International  
  Food Information Council Foundation

- Robert “Bob” Gravani, PhD  
  Professor of Food Science, Cornell University

- Diane Van  
  Manager, USDA Meat and Poultry Hotline

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Agenda

• Brief Background

• Presentation of Findings

• Pathogens that Cause Foodborne Illness

• Practical Tips for Consumers

• Questions and Answers
  – Submit your questions via email to foodandhealth@ific.org

• Twitter hashtag: #foodsafety

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International Food Information Council Foundation

Mission:

To effectively communicate science-based information on health, nutrition, and food safety for the public good.

Primarily supported by the broad-based food, beverage and agricultural industries.

http://www.ific.org

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Methodology

Methodology | Web Survey
---|---
Population | Representative Sample of Americans Aged 18+
Data Collection Period | February 19-March 11, 2009
Data Weighting* | Data Weighted on Age, Gender, Income, Education and Race

*Weighting is a widely accepted statistical technique that is used to ensure that the distribution of the sample reflects that of the population on key demographics. With any data collection method, even when the outgoing sample is balanced to the Census, some populations are more likely than others to respond.
### 2009 Food & Health Survey

How much of an impact do the following have on your decision to buy foods and beverages?

- **Taste:** 34% Some Impact, 53% Great Impact, total 87% Impact
- **Price:** 31% Some Impact, 43% Great Impact, total 74% Impact
- **Healthfulness:** 35% Some Impact, 26% Great Impact, total 61% Impact
- **Convenience:** 26% Some Impact, 26% Great Impact, total 52% Impact

Some Impact □ Great Impact

How much of an impact do the following have on your decision to buy foods and beverages? (n=1064)

▲ / ▼ Significant increase/decrease from year indicated

2009 Food & Health Survey
## Sources of Information Guiding Food Safety and Health Practices

<table>
<thead>
<tr>
<th>Information Source</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food label</td>
<td>61%</td>
</tr>
<tr>
<td>Friends/family</td>
<td>42%</td>
</tr>
<tr>
<td>Health professional</td>
<td>33%</td>
</tr>
<tr>
<td>Grocery store, drug store, or specialty store</td>
<td>28%</td>
</tr>
<tr>
<td>Magazine article</td>
<td>28%</td>
</tr>
<tr>
<td>Internet article</td>
<td>27%</td>
</tr>
<tr>
<td>TV news program</td>
<td>24%</td>
</tr>
<tr>
<td>Product or manufacturer communications</td>
<td>13%</td>
</tr>
<tr>
<td>Newspaper</td>
<td>13%</td>
</tr>
<tr>
<td>Health association</td>
<td>9%</td>
</tr>
<tr>
<td>Dietitian</td>
<td>8%</td>
</tr>
<tr>
<td>Government official/agency</td>
<td>5%</td>
</tr>
<tr>
<td>Radio news program</td>
<td>3%</td>
</tr>
<tr>
<td>Blog or social networking site</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>4%</td>
</tr>
</tbody>
</table>

What three sources of information do you use most often to guide your food, nutrition, and food safety practices? *Select three.* (n=1064)

▲ / ▼ Significant increase/decrease from year indicated

*2009 Food & Health Survey*
What information do you look for on the food or beverage package when deciding to purchase or eat a food or beverage? Select all that apply. (n=1064)

▲ / ▼ Significant increase/decrease from year indicated

2009 Food & Health Survey
FOOD SAFETY

Confidence in the Safety of the U.S. Food Supply
Safe Food Preparation

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In general, who do you believe is responsible for food safety in the U.S.? Select all that apply.

(n=1064)

NOTE: “Other” response (one percent) not shown
“Everyone has to do their part to make sure that the process from plant to consumer is a good one and a safe one”

View this video and others at: http://www.ific.org/videos/Index.cfm
Confidence in the Safety of the U.S. Food Supply

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Please submit your questions via email to foodandhealth@ific.org
Nearly Half of Consumers are Confident in the Safety of the U.S. Food Supply.

To what extent, if at all, are you confident in the safety of the U.S. food supply? (n=1064)

- Extremely or somewhat confident: 49%
- Not very confident: 20%
- Neither confident nor unconfident: 26%
- Not at all confident: 5%

▲ / ▼ Significant increase/decrease from year indicated
What, in your opinion, is the most important food safety issue today? Select one. (n=1064)*

*Total does not add to 100% due to rounding

▲ / ▼ Significant increase/decrease from year indicated
Safe Food Preparation

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Fewer Americans are Taking Food Safety Precautions to Reduce Their Risk

Which of the following actions do you perform regularly when cooking, preparing, and consuming food products? Select all that apply. (n=1064)

- Wash my hands with soap and water ▼ '08 87%
- Wash cutting board(s) with soap and water or bleach 77% ▼ '08
- Cook to required temperature (such as 165 degrees F for poultry) 71% ▼ '08
- Properly store leftovers within 2 hours of serving 69% ▼ '08
- Separate raw meat, poultry and seafood from ready-to-eat food products 63% ▼ '08
- Use different or freshly cleaned cutting boards for each product (such as raw meat/poultry/produce) 50%
- Use a food thermometer to check the doneness of meat and poultry items 25%
- None of the above ▲ 5%

▲ / ▼ Significant increase/decrease from year indicated

2009 Food & Health Survey
Which of the following actions do you perform regularly when preparing microwavable meals (e.g., frozen meals, pre-packaged meals that contain cooking instructions) at home? Select all that apply. (n=1064)

- Follow ALL the cooking instructions 68% ▼ ’08
- Flip, rotate, or stir during the microwave cooking process 62% ▼ ’08
- Check the meal package label at point of purchase to determine if the product is suitable for microwave cooking 58%
- Let food stand for appropriate time after microwaving 40% ▼ ’08
- Increase or decrease cooking times based on my microwave 44% ▼ ’08
- Check microwave wattage 14%
- Use a food thermometer to make sure the food reaches the required temperature 5%
- None of the above 6%
- I do not have or use a microwave 6% ▲ ’08

▲ / ▼ Significant increase/decrease from year indicated
The Majority of Americans do not Perceive Any Obstacles to Handling Food Safely.

What obstacles, if any, do you face when handling food safely? Select all that apply. (n=1064)

- Lack of information: 19%
- Not enough time: 17%
- I do not have the proper equipment available: 11%
- Lack of interest: 9%
- Not concerned about food safety: 5%
- I do not face any obstacles when handling food safely: 58%

NOTE: “Other” response (one percent) not shown

2009 Food & Health Survey
A Call to Action

• Increase awareness about general food safety practices
  – Re-introduce the food safety basics
  – Understand and communicate the risks of foodborne illness

• Identify target audiences to receive food safety education

• Work in concert with all stakeholders to communicate about food safety risks
  – Consumers
  – Industry
  – Government
  – Academics
  – Retailers

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Risks of Foodborne Illness

By
Robert B. Gravani, Ph.D.
Department of Food Science
Cornell University
Today’s consumers are more concerned about food quality and safety than ever before!
Every year foodborne illnesses result in an estimated:

- 76 Million cases of illness
- 325,000 people hospitalized
- 5,000 needless deaths each year
- Economic losses ~ $10 - $83 Billion

Sources: CDC & Food Code
Foodborne Illness in the U.S.

What do these numbers really mean?

• 1 in 4 Americans will develop foodborne illness

• 1 in 1000 people will be hospitalized due to the symptoms of foodborne illnesses
# Foodborne Outbreaks, 2007

<table>
<thead>
<tr>
<th>Etiology</th>
<th>No. Outbreaks</th>
<th>No. Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bacterial</td>
<td>257</td>
<td>6,410</td>
</tr>
<tr>
<td>Chemical</td>
<td>34</td>
<td>141</td>
</tr>
<tr>
<td>Parasitic</td>
<td>5</td>
<td>65</td>
</tr>
<tr>
<td>Viral</td>
<td>199</td>
<td>6,120</td>
</tr>
</tbody>
</table>
### Foodborne Outbreaks, 2007

<table>
<thead>
<tr>
<th>All Etiologies</th>
<th>No. Outbreaks</th>
<th>No. Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Confirmed</td>
<td>507</td>
<td>13,138</td>
</tr>
<tr>
<td>Total Suspected</td>
<td>226</td>
<td>2,944</td>
</tr>
<tr>
<td>Unknown</td>
<td>362</td>
<td>5,079</td>
</tr>
<tr>
<td>Grand Total</td>
<td>1097</td>
<td>21,183</td>
</tr>
</tbody>
</table>
Bacterial Pathogens of concern

* Salmonella

* Listeria

* E. coli O157:H7
Viral Foodborne Pathogens

*Norovirus*

*Hepatitis A*
Factors Affecting the Number of Foodborne Illnesses

• Increases in elderly and chronically ill persons
• Changes in consumer practices: awareness of hazards, risks and hygiene
• Changes in eating habits
• International travel
• Globalization of the food industry
Supply Chain Complexity

Kennedy, 2007
Cheeseburger Supply Chain

Ingredients:
- baking soda
- wheat gluten
- calcium propionate
- enzymes
- mono- and diglycerides
- diacetyl tartaric acid esters
- ethanol
- sorbitol
- polysorbate 20
- potassium propionate
- sodium stearoyl lactylate
- corn starch
- ammonium chloride
- ammonium sulfate
- calcium peroxide
- ascorbic acid
- azodicarbonamide

- bleached wheat flour
- malted barley flour
- thiamine
- riboflavin
- Niacin
- folic acid
- reduced iron
- Water
- corn syrup
- sesame seeds
- soybean oil
- Yeast
- Salt
- calcium sulfate
- calcium carbonate
- calcium silicate
- soy flour

- Milk
- Water
- sodium citrate
- sodium phosphate
- artificial color
- acetic acid
- Enzymes

- Special Sauce
- Soybean oil
- distilled vinegar
- egg yolks
- sugar
- corn syrup
- spice extractives
- xanthan gum
- prop. glycol alginate
- sodium benzoate
- mustard bran
- hydrolyzed proteins
- paprika
- calcium disodium

- Cucumbers
- water
- Vinegar
- Salt
- calcium chloride
- Alum
- Natural flavorings
- polylsorbate 80
- turmeric

- USDA inspected beef

- Lettuce
- dehydrated onions
- Cottonseed oil
- Soybean oil

- Grill Seasonings
- Salt
- Pepper
- cottonseed oil
- soybean oil

- Kennedy, 2007
Factors Affecting the Number of Foodborne Illnesses

- Changes in food processing technologies
- Improved diagnostics and medical advances
- Increases in food prepared outside the home: multiple handling of food
- Changes in microorganisms: Microbial Evolution
Changes in Microorganisms

- Fewer cells needed to cause illness & some of the illness are more severe
- Severe complications can result
- Adaptation to environmental conditions
The Cycle of Infection

HOSTS

PATHOGENS

ENVIRONMENT
Factors Increasing the Risk of Foodborne Infection or the Severity of Illness

- Microbial
- Host
- Environmental

CAST, 1994
Microbial Factors

• Type and strain of pathogen ingested
  * Some pathogens & strains are more virulent than others

• Quantity of pathogens ingested
  * High numbers ingested may increase severity of illness &/or shorten onset time

CAST, 1994
Host Factors

- Age less than 5 years
  * Lack of developed immune system
  * Smaller infective dose-by-weight required

- Age greater than 50 or 60 years (depending on pathogen)
  * Immune systems failing; weakened by chronic illnesses

CAST, 1994
Host Factors

• Pregnancy
  * Altered immunity during pregnancy

• Hospitalized persons
  * Individuals already debilitated by illness

• Concomitant Infections

CAST, 1994
Host Factors

- Immuno-compromised individuals… including those on chemotherapy or radiation therapy; recipients of organ transplants taking immuno-compromising drugs; persons with leukemia, AIDS, or other illnesses
Persons with AIDS and Late-Stage HIV

- **Salmonellosis**
  - 20 times higher risk
  - 6 times more likely to develop life-threatening blood disease

- **Listeriosis**
  - 200-300 times higher risk
  - 25% of cases end in death
Environmental Factors

- Geographic location
  * Exposure to virulent strains of pathogens
  * Varied distribution of organisms in water, food & soil

CAST, 1994
Reducing Foodborne Illness through Prevention

Production

Processing

Distribution and Storage

Transportation

Consumers

Retail

Preparation

Consumption

Education

Training

Surveillance

Research

Adapted from CDC
Reducing Foodborne Illness through Prevention

Production
Processing
Distribution and Storage
Transportation
Consumers
Retail
Preparation
Consumption
Illness?

Regulations, Enforcement, and Guidance

Education
Training
Surveillance
Research

Adapted from CDC
The End
Food Safety Thrives When You Focus on 5

Diane Van, Manager
USDA Meat and Poultry Hotline

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Three major causes of foodborne illness in the United States are:

-- Not cooking food to a safe temperature.
-- Holding food at an unsafe temperature.
-- Lack of hand washing.

The mission of USDA’s Food Safety and Inspection Service (FSIS) is to protect the health of Americans and prevent foodborne illness.
1. Purchasing
2. Cooking
3. Holding
4. Separating
5. Cleaning

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Purchasing

1

Food Safety Thrives When You Focus on Five
Make sure meat, poultry and seafood products -- whether raw, pre-packaged, or from the deli -- are refrigerated when purchased.

Purchase meat, poultry, seafood and other perishable products last. Keep packages of raw meat, poultry and seafood separate from other foods, particularly foods that will be eaten without further cooking.
No Dents

Canned goods should be free of dents, cracks or bulging lids.
Go Directly Home

Plan to drive directly home from the grocery store. You may want to take a cooler with ice for perishables. Always refrigerate perishable food within 2 hours. Refrigerate within 1 hour when the temperature is above 90 °F.
Cooking

Food Safety Thrives When You Focus on Five
Always cook to

“Safe Minimum Internal Temperatures.”

If harmful bacteria are present, only thorough cooking will destroy them. Freezing or rinsing the foods in cold water is not sufficient to destroy bacteria.
to determine if your meat, poultry or casserole has reached a safe minimum internal temperature. Check the product in several spots to assure that a safe temperature has been reached.

Color is not a reliable indicator of safely cooked foods.
When Microwaving Foods

- Carefully follow manufacturers instructions.
- Know your microwave wattage. Wattage makes a difference in the amount of time needed to cook food to a safe internal temperature.
- Use microwave-safe containers, cover, rotate, and allow for the standing time, which contributes to thorough cooking.
Holding

Food Safety Thrives

When You Focus on Five
Hold hot foods at or above 140 °F and cold foods 40 °F or below.

Keep hot food hot with chafing dishes, slow cookers, and warming trays.
Keep Food Cold

- Nest dishes in beds of ice.
- Or use a series of small serving trays and replace them often. Replace empty platters — don’t refill them.
- Discard food that has been sitting out and may have been handled by many people.
Don’t Leave Food Out

Never leave foods, raw or cooked, at room temperature longer than 2 hours.

On a hot day with temperatures above 90 °F, this decreases to 1 hour.
Reheat to 165 °F

Do not use chafing dishes, slow cookers, and warming trays for reheating. They're just for maintaining the reheated temperature.

Make sure to reheat foods to at least 165 °F.

Bring soups, sauces and gravies to a rolling boil.
Separating

Food Safety Thrives When You

Focus on Five
Cross-contamination is the transfer of harmful bacteria to a food from other foods, cutting boards, utensils, surfaces, or hands. Prevent it by keeping food separated and by keeping hands, utensils, and food handling surfaces clean.
Cross-contamination

Use one cutting board for fresh produce — and a separate one for raw meat, poultry, and seafood.
Separate foods in your grocery cart. Keep raw meat, poultry, seafood, and their juices away from other food to further prevent the possibility of cross-contamination.
Cleaning

Food Safety Thrives When You Focus on Five
Cleaning

Always wash hands with soap and warm water for 20 seconds

- Before beginning food preparation,
- After handling food, and
- After using the bathroom, changing diapers, or touching pets.

Not washing hands is a major cause of foodborne illness.
Wash counters, equipment, utensils, and cutting boards with soap and hot water immediately after use.

Sanitize with a chlorine solution of 1 tablespoon of unscented, liquid chlorine bleach in 1 gallon of water.

Let the solution stand on the board after washing, or follow the instructions on sanitizing products.
Protect Your Family

- PURCHASE
- COOK
- CHILL
- SEPARATE
- CLEAN

Food Safety Thrives When You Focus on Five
Call the USDA Meat & Poultry Hotline

If you have a question about meat, poultry, or egg products, call the USDA Meat and Poultry Hotline toll free at

1-888-MPHotline
(1-888-674-6854)

The Hotline is open year-round Monday through Friday from 10 a.m. to 4 p.m. ET (English or Spanish). Recorded food safety messages are available 24 hours a day. Check out the FSIS Web site at


Send E-mail questions to MPHOTLINE.FSIS@USDA.GOV.

Food Safety Thrives When You Focus on Five
FSIS’ automated response system can provide food safety information 24/7.

Also, live “chat” now available.

Look for the Spanish version of “Ask Karen” in 2010.

Diane Van, Manager
USDA Meat and Poultry Hotline

AskKaren.gov
Questions and Answers

Please submit your questions via email to foodandhealth@ific.org
Upcoming Web Casts:

**November:** Food & Health Survey Series
**Part 4:** “Americans’ Approach to Dieting and Weight Management Strategies”
Food & Health Survey Report
Available on IFIC.org and
Foundation Publications Store!

The Executive Summary is available at
http://www.ific.org/research/foodandhealthsurvey.cfm

Full Report is available for purchase at
http://www.ificpubs.org/servlet/Detail?no=47

Data Tables and Comparative Topline are available for purchase at
http://www.ificpubs.org/servlet/Detail?no=48

Twitter hashtag: #foodsafety
CPE Credit

• Registered Dietitians can download a Certificate of Completion for ONE CPE credit at:

http://www.ific.org/adacpe/2009fandhsurveyCPE.cfm
International Food Information Council (IFIC) Foundation

2009 FOOD & HEALTH SURVEY
Consumer Attitudes toward Food, Nutrition & Health

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For inquiries: foodandhealth@ific.org