



# Nutrition & Food Safety? Not that Big of a Leap!



# Welcome from PFSE



**Britanny Saunier**  
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Partnership for Food Safety Education  
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# Today's Line Up



- **Welcome / Housekeeping** with Brittany Saunier, Partnership for Food Safety Education
- **Food Safety Education & Retail Dietitians** with Carrie Taylor, RDN, KYT, KMOG, Big Y Foods
- **Incorporating Food Safety into Recipes** with Raeanne Sarazen, MA, RDN, Culinary Nutrition Consulting
- **Linking Food Safety & Nutrition: What and Why?** with Elisabetta Lambertini, Ph.D., Global Alliance for Improved Nutrition
- **Roundtable Discussion and Q&A** with Guest Speakers



# Housekeeping



Join the chat! Or send a question during the webinar.



After the webinar, you'll receive a brief survey. Please complete it.

**Help us improve!**





# Continuing Education Units



## One-hour CEU available from ANFP, CDR, NCHEC & NEHA

- Download certificates from chat box
- Follow-up email
- Download at [fightbac.org](https://fightbac.org) under “Free Resources” tab and “Recorded Webinars”
- Educators seeking NCHEC must complete online questionnaire by **Tuesday, April 30**



# About the Partnership



## We're an active network of...

- 13,000 health and food safety educators
- 40 Partner organizations
- Federal liaisons (CDC, FDA, USDA)

All working together to advance trusted, consistent, science-based behavioral health messaging.



# Did You Know?



## Every year in the United States...

- 1 in 6 people (or 48 million people) get sick from foodborne illness, commonly called food poisoning
- 128,000 are hospitalized
- 3,000 die from eating contaminated food

Following simple food safety steps can help prevent foodborne illness and the spread of germs.



# Poll Question #1



**Would you rather give up chocolate or give up cheese for the rest of your life?**

1. Chocolate
2. Cheese
3. Neither, please don't make me!
4. Get rid of them both!



# Food Safety Education & Retail Dietitians

February 29, 2024



YOUR FAMILY MARKET™





**Carrie Taylor, RDN, KYT, KMOG**

Lead Registered Dietitian

Big Y Foods

[bewell@bigy.com](mailto:bewell@bigy.com)



# Why Retail Dietitians?

- ✓ Registered dietitian nutritionists have **unique qualifications** to be the food safety experts.
- ✓ Customers still have a lot to learn!
  - Rinsing chicken.\*
  - Thawing meats on countertops.
  - Testing raw meat doneness by color or feel.
  - Not washing hands correctly.
  - Storing meat above produce in the refrigerator.



\*Drexel University found that 90% of people do this to rid their chicken of "slime."

# Food Safety Education @ Big Y

- ✓ Our dietitian team has been big supporters of the Fight BAC! campaign from the beginning. (2005)
- ✓ Food safety education is a pillar of our consumer education.
- ✓ In 2020, Big Y became an official BAC Blaster.



**FIGHT BAC!** HIGH OR LOW, BAC'S GOT TO GO!

**LITTLE Y's CORNER**

**Instructions:**  
#1. Fill in the missing numbers on the thermometer using markers or crayons to decorate.  
#2. Use the completed thermometer to answer the riddles below.

**IT'S GETTING COLD IN HERE!** **I JUST CAN'T TAKE THE HEAT!**

**Riddle #1:**  
I'm the temperature used for storing foods in your freezer.  
BRRRRRR!  
What temperature am I? \_\_\_\_°

**Riddle #2:**  
I'm the temperature used to keep cold foods safe in your refrigerator.  
IT'S GETTING COLD IN HERE!  
What temperature am I? \_\_\_\_°

**Riddle #3:**  
I'm the temperature that makes hamburgers safe to eat.  
BAC CAN'T TAKE THE HEAT!  
What temperature am I? \_\_\_\_°

**The 6 Steps of Handwashing**


- Step #1:** Wet your hands with warm water.
- Step #2:** Apply soap.
- Step #3:** Rub your hands together, and even get between those fingers for 20 seconds.
- Step #4:** Don't forget your fingertips. Use a scrubber if you have one.
- Step #5:** Rinse the germs away.
- Step #6:** Dry your hands.

**NSF Scrub Club**

Sources:  
University of Georgia Cooperative Extension [www.uga.edu/extension](http://www.uga.edu/extension)  
Partnership for Food Safety Education [www.fda.gov](http://www.fda.gov)  
www.scrubclub.org



# Food Safety Education @ Big Y: Print



## Dietitian's Corner

With Big Y's Wellness Team — Registered Dietitians Carrie Taylor, RDN, LDN and Andrea Luttrell, RDN, LDN


### HOLIDAY FOOD SAFETY


#### Simple Steps to a Happy, Healthy Holiday Season

Whether you're hosting for the first time or doing so as an annual tradition, it is imperative you ensure family and friends remain safe from a foodborne illness.

The chaos of holiday kitchens only begets opportunities for bacteria to contaminate the food you're preparing. Taking steps to follow food safety precautions can mean the difference between a festive holiday season and being sick for days.

Follow these tips from the Partnership for Food Safety Education and visit [HolidayFoodSafety.org](http://HolidayFoodSafety.org) to learn more:






#### CLEAN

- Wash hands properly — scrubbing with soap and water for 20 seconds before and after handling food.
- Wash countertop before, during and after food preparation with a clean cloth.
- Use clean knives, cutting boards, pans, plates and food storage containers.
- Rinse fruits and vegetables — regardless of their rind — under running water prior to preparing.




#### SEPARATE

- NEVER wash raw meat before preparing it. Bacteria from the raw meat can splatter over your sink, faucet, countertops and on you! Cooking meat properly will kill harmful bacteria.
- Prepare raw meat, poultry, seafood and unpasteurized raw eggs on their own surfaces and cutting boards, and with their own utensils.
- Place raw meat at the bottom of your shopping cart and refrigerator in case juices leak.



#### COOK

- Verify food is properly cooked with an instant-read food thermometer — **NOT** by how it looks, feels or tastes. Follow current recommended internal cooking temperatures:
  - Leftovers & Casseroles — 165°F
  - Ground Meat & Meat Mixtures — Beef, Pork, Veal and Lamb 160°F; Turkey and Chicken 165°F
  - Fresh Beef, Veal, Lamb — 145°F with a 3 minute resting period
  - Poultry — Chicken, Turkey, Duck, Goose and Stuffing (alone or in bird) 165°F
  - Ham — Raw 160°F and Pre-cooked 140°F
  - Egg Dishes — 160°F
  - Seafood — Fin Fish 145°F



#### CHILL

- Hold hot foods at 140°F or higher while serving with heated chaffing dishes or slow cookers.
- Hold cold foods below 40°F or cooler while serving in ice baths or in frozen, insulated containers.
- Do not keep food out longer than 2 hours.
- Store food promptly in small, shallow food containers in a refrigerator at 40°F or below.
- Eat or freeze leftovers within 3-4 days. Celebrate **Throw Out Your Leftovers Day on November 29.**

Be Food Safe cartoon characters used with permission from the United States Department of Agriculture, Food Safety Inspection Service — [www.fsis.usda.gov/be\\_foodsafe](http://www.fsis.usda.gov/be_foodsafe).

### HELP FOR HOME COOKS

Need a food safety question answered right away? Call the U.S. Department of Agriculture Meat and Poultry Hotline at **1-888-MPHOTLINE (1-888-674-6854)** or the U.S. Food and Drug Administration's support line at **1-888-SAFEFOOD (1-888-723-3366)**.

The food and nutrition advice in the Living Well® Eating Smart newsletter is not meant to take the place of your primary care physician. We recommend you ask your health care provider or registered dietitian for further information specific to your needs. Nutrient Scores in this newsletter were verified as of 10/28/2014 and are subject to change.

living well eating smart 3

living well eating smart

## FAMILY FOOD SAFETY IS FUNDAMENTAL



### CAN YOU SPOT THE FOOD SAFETY DO'S & DON'TS?

Circle the do's and cross out the don'ts in the pictures below.



1. WASH HANDS WITH WATER



2. WASH HANDS WITH SOAP & WATER



3. REFRIGERATOR SET TO 40°F



4. REFRIGERATOR SET TO 60°F



5. EAT RAW COOKIE DOUGH



6. EAT FRESHLY BAKED COOKIES



7. USE SAME CUTTING BOARD FOR RAW MEAT & VEGETABLES



8. USE SEPARATE CUTTING BOARDS

Answers (Do's): 1. Wash hands with soap and water. 2. Refrigerator at 40°F. 3. Baked cookies with soap and water. 4. Two separate cutting boards. 5. Two separate cutting boards.

Learn More About Food Safety at [StoryOfYourDinner.org](http://StoryOfYourDinner.org)

At Big Y, we believe in the power each and every one of us has in keeping our food safe. That's why we're proud to announce that we've partnered with the Partnership for Food Safety Education.

**As official Bac(ter)ia Blasters,** our goal is to provide you with the most up-to-date, evidence-based food safety education from the experts. From adding food safety prompts into our recipes to providing tips on how you can Fight BAC®, we want to help you ensure your family's meals and snacks remain safe.

The steps to preventing a foodborne illness are easy enough for everyone in your family to follow. Start getting family and friends involved — one hand wash at a time — with the activity on the left!






# Food Safety Education @ Big Y: Online

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**Dig in** | **be well** with Big Y

## Playing It Safe With Thanksgiving Leftovers

Author: be well™ with Big Y® Registered Dietitian Team


The "how-tos" of getting the most out of your holiday leftovers.

When your cooking and eating is done and guests bid their farewell, what do you do with all the leftovers? Whether you repurpose the holiday bird in recipes like **turkey strata** and **pot pie** or simply enjoy a few more rounds of Thanksgiving's bounty with all the trimmings, stay safe from foodborne illness with these tips:

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**Dig in** | **be well** with Big Y

## Hurricane Preparedness: Keeping Food Safe During Power Outages

Author: be well™ with Big Y® Registered Dietitian Team

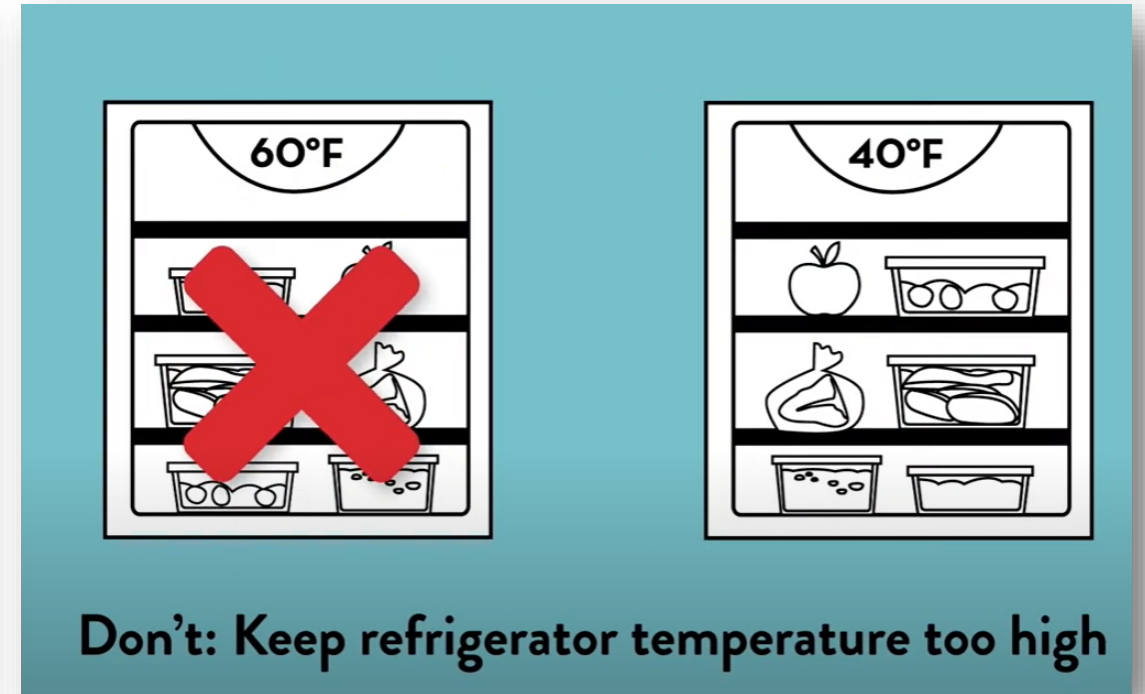
According to the National Oceanic and Atmospheric Administration (NOAA), the Atlantic hurricane season runs from June 1 to November 30. Combine this year's hurricane season with the heavy rains we have already experienced this summer season, it's important to expect, and prepare, for potential power outages.

Do you know how to safely handle food during an outage?





# Food Safety Education @ Big Y: Video Media



# Food Safety Education @ Big Y: Social Media



# Food Safety Education @ Big Y: Recipes

## *Safe Recipe Style Guide*

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Recipes / Sauces / Dips & Dressings





### Jones Family Farms Strawberry Salsa



This recipe was featured as a Living Well Eating Smart tip on ABC40 August 7, 2013.

This recipe is from Jones Family Farms and can be found on their recipe page. To watch the video of this recipe, visit our YouTube page!

Recipe by: 

Share    

#### Ingredients

- 1 jalapeno, finely chopped
- 4 cups hulled and finely chopped strawberries
- 1 yellow bell pepper, stemmed, seeded and finely chopped
- 1 red bell pepper, stemmed, seeded and finely chopped
- 1/4 cup chopped fresh cilantro
- 3 tablespoons fresh-squeezed lime juice
- Food Club salt, to taste

#### Directions

1. Wash hands with soap and water.
2. Rinse fresh produce.
3. Gently toss ingredients together.
4. Set aside for 15 to 30 minutes to allow flavors to combine.
5. Serve with tortilla or pita chips or over chicken and fish.

Big Y's recipes reflect the guidance of the Partnership for Food Safety Education. To learn more, visit [fightbac.org](http://fightbac.org)!

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Recipes / Dinner





### Barbara's Spaghetti with Herbs & Tomato Sauce



Recipe featured on 10/20/16 Western Mass News Segment with Carrie Taylor, RDN, LDN and Andrea Luttrell, RDN, LDN.

Watch the recipe video [here!](#)

Recipe by: 

Share    

#### Ingredients

- 1 cup Food Club marinara sauce
- 1/2 cup Food Club olive oil
- 2 pounds ripe tomatoes, cored and diced with most of the seeds removed
- 1 clove garlic, minced
- Food Club salt, to taste
- Food Club black pepper, to taste
- 1 (16-ounce) box Full Circle Whole Wheat Spaghetti
- 20 chives, chopped

#### Directions

1. Wash hands with soap and water.
2. Rinse fresh produce.
3. In a large saucepan, warm marinara sauce until heated through.
4. Stir in olive oil, tomatoes, garlic, salt and pepper. Remove from heat.
5. Meanwhile, cook spaghetti according to package instructions. Drain and rinse in hot water to remove loose starch.
6. Place pasta in a large bowl and toss with fresh herbs and Parmesan.
7. Ladle sauce over pasta and enjoy.

Big Y's recipes reflect the guidance of the Partnership for Food Safety Education. To learn more, visit [fightbac.org](http://fightbac.org)!





# Food Safety Education @ Big Y: Brand Collaborations



## Instructions:

1. Wash hands with soap and water.
2. Rinse fresh produce under cold running water prior to prepping.
3. Toast coriander and cumin seeds in a dry skillet over medium heat, shaking often, until fragrant and slightly darkened in color (about 3 minutes). Transfer to a spice mill or food processor. Let cool, then coarsely grind. Set spice mixture aside.
4. Place scallions and 1 tablespoon oil in skillet over medium-high heat, season with kosher salt, and cook, turning occasionally, until softened and deeply charred (about 4 minutes). Transfer to a cutting board then trim roots and discard. Finely chop scallions and place in a medium bowl. Add reserved spice mixture, chili pepper and parsley.
5. Cut lemon in half. Finely zest and juice one half into bowl. Add 1 cup oil and stir well to combine. Season with kosher salt, to taste.
6. Slice Chabaso Rainin' Grains Ciabatta and toast to desired darkness.
7. To serve, brush with olive oil. Place sliced avocados onto each ciabatta slice and spoon with salsa. Sprinkle with salt, if desired.



# Food Safety Education @ Big Y: Our Dietitians

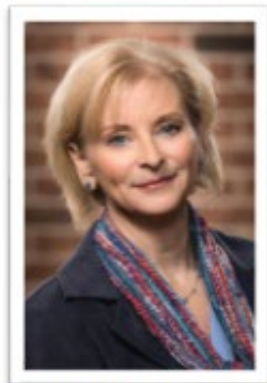
- ✓ We built our team with intention to be best positioned in assisting consumer's expansive areas of interest & needs...*including food safety.*



Carrie Taylor, RDN, LDN, KYT



Andrea Luttrell, RDN, LDN



Kathy Jordan, MS, RDN, CPT  
Western MA Consulting RD



Susan Mazrolle, MS, RDN  
Virtual Consulting RD



Natalie Webb, MS, RDN, LD, FAND  
Connecticut Consulting RD



Jacqui Campbell, MS, RD, CDN  
Consulting RD - Recipe Specialist



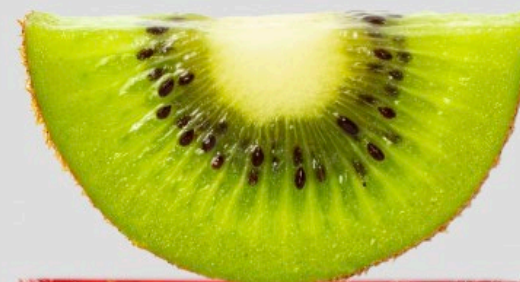




# Incorporating Food Safety into Recipes



Raeanne Sarazen, MA, RDN

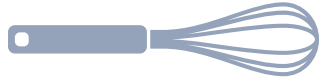


**RAEANNE  
SARAZEN**

# FOOD SAFETY IN RECIPES



**Challenges**



**Target Audience**



**Incorporate messages**



**Resources**

# THE EXPLOSION OF RECIPES



Tik Tok

YouTube



Instagram



recipe

FOOD52



serious eats

epicurious

The New York Times

Cooking

substack



## 20 Best Food Blogs

Food bloggers have taken over the internet – and how did we ever live without them?



RAEANNE SARAZEN



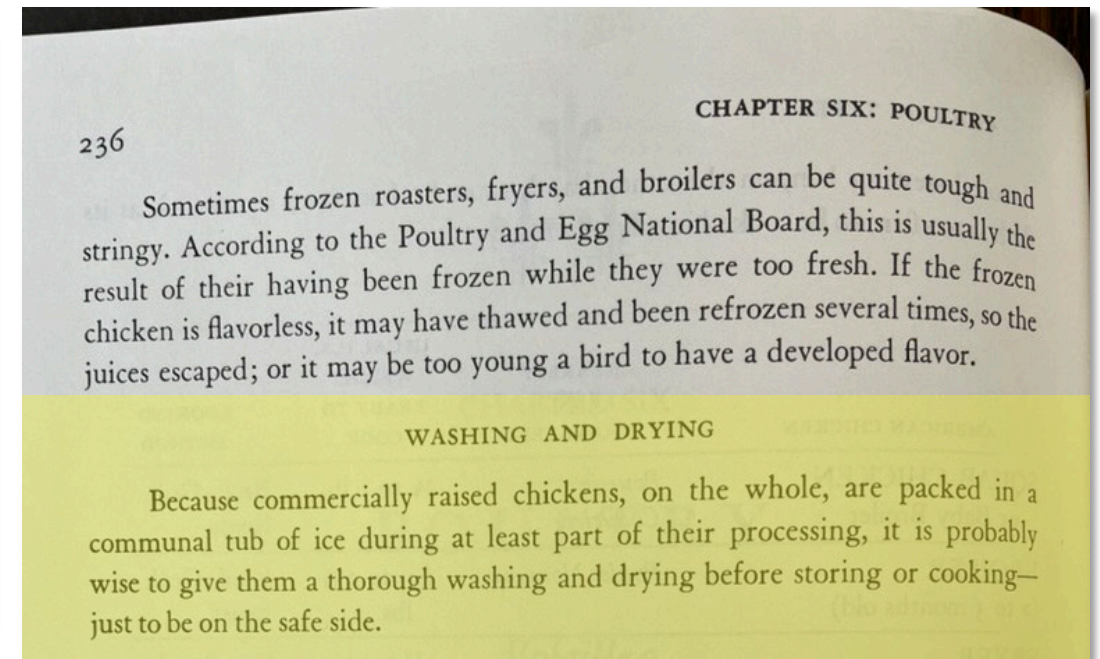
# FOOD SAFETY IN RECIPES: CHALLENGE (UNLEARNING)

## Better Homes and Garden



1953

## Mastering the Art of French Cooking



2001

2024



# FOOD SAFETY IN RECIPES: IMPORTANT

Recipes are an educational tool to teach people how to cook and eat healthier (and safer)



# FOOD SAFETY IN RECIPES: CHALLENGE

- **Length of copy** –  
intimidate/overwhelm
- **Space constraints** – no room
- **Kitchen thermometer** – don't own one (or know how to use)





# FOOD SAFETY IN RECIPES: TARGET AUDIENCE



# FOOD SAFETY IN RECIPES:

## Limited Cooking Knowledge

### Grilled Pork and Pineapple Skewers

#### Ingredients

2 tablespoons canola oil  
2 tablespoons rice wine vinegar  
1-inch piece fresh ginger, grated  
2 teaspoons soy sauce  
1¼ pounds pork tenderloin,  
cut in 2-inch cubes  
1 can (20-ounces) pineapple chunks  
in juice, drained

#### Directions

*Before you begin:* Wash your hands.

1. Combine oil, vinegar, ginger and soy sauce in a medium bowl. Add pork and toss to coat well.
2. Cover bowl and marinate in the refrigerator for about 4 hours.
3. Thread pork and pineapple chunks onto wooden skewers. Put on plate.
4. Brush skewers with marinade. Throw out leftover marinade.
5. Grill on medium-high heat, turning once, until pork reaches an internal temperature of 145 degrees, about 8 to 10 minutes.





# FOOD SAFETY IN RECIPES:

## Good, but Too Much

### EASY CHICKEN AND VEGETABLE STIR-FRY SERVES 4

1 tbs vegetable oil  
1 lb boneless skinless chicken breast, cut into 1-inch pieces  
2 garlic cloves, finely chopped  
2 tsps gingerroot, finely chopped  
1 medium onion, **scrubbed with clean vegetable brush under running water** and cut into thin wedges  
1 cup baby carrots, **scrubbed with clean vegetable brush under running** and cut lengthwise in half  
1 cup chicken broth soup  
3 tbs soy sauce  
2 tsps sugar  
2 cups broccoli flowerets **gently rubbed under cold running water**  
1 cup (3 ounces) fresh mushrooms **gently rubbed under cold running water** and diced  
½ cup red bell pepper **scrubbed with clean vegetable brush under running water** and diced  
2 tsps cornstarch  
4 cups hot cooked Chinese plain noodles

#### Directions:

**Wash hands with soap and water.** Heat vegetable oil in skillet over medium-high heat. Add chicken, garlic and gingerroot; stir-fry 2 to 3 minutes or until chicken is brown. **Wash hands with soap and water after handling uncooked chicken. Wash cutting board and knife after touching raw chicken.**

Add onion, carrots, ¾ cup of the broth, the soy sauce and sugar. Cover and cook over medium heat 5 minutes, stirring twice.

Add broccoli, mushrooms and bell pepper. Cover and cook about 5 minutes, stirring occasionally, until chicken is no longer pink in center and **internal temperature reaches 165 °F on food thermometer**, and vegetables are crisp-tender.

Mix cornstarch with remaining ¼ cup broth; stir into chicken mixture. Cook, stirring frequently, until sauce is thickened. Serve over noodles or rice.

# FOOD SAFETY IN RECIPES:

## Limited Cooking Knowledge

### Directions



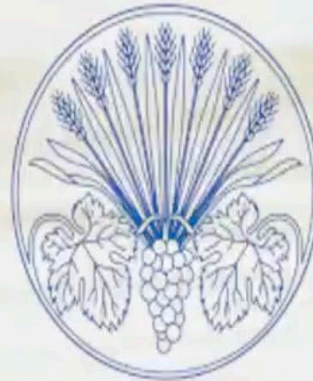
- 1 Cut chicken into thin strips. Put the chicken on clean plate.



- 2 Wash hands, cutting board, and knife after touching the uncooked chicken.



- 3 With the clean cutting board, chop the onions.



Les Dames d'Escoffier  
Chicago Chapter

# Overnight Oats

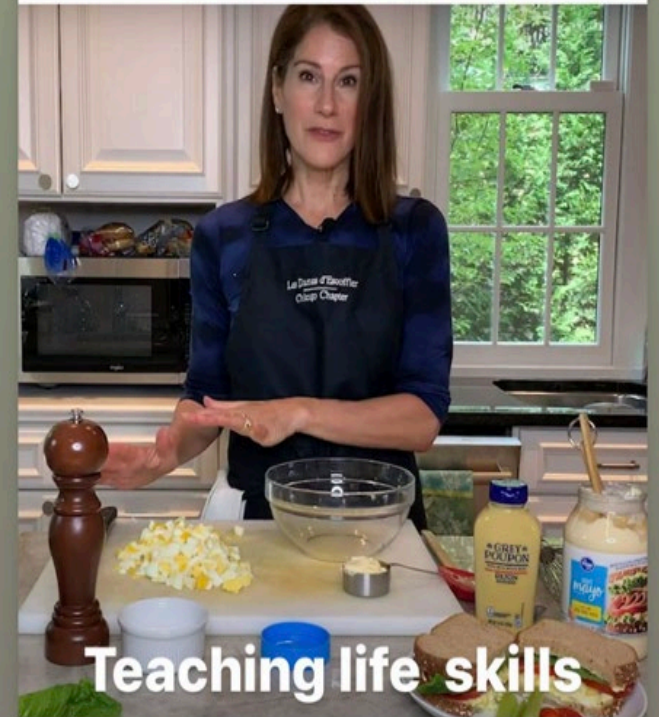
## Les Dames D'Escoffier Chicago

### for

## Boys & Girls Club of Chicago



lesdameschicago



lesdameschicago The Green Tables Committee  
produced a series of awesome video cooking lessons fo...



# FOOD SAFETY IN RECIPES:

## Higher-level Cooking Knowledge

### Directions

1. Place the chicken in a 1-gallon zip-lock bag (no need to wash it first).
2. ...
3. ...
4. Grill chicken, covered with lid, turning over occasionally, until thermometer inserted into thickest part of the chicken is 165 degrees, about 10 to 12 minutes.\*

### Note:

If you want perfectly grilled chicken buy a digital meat thermometer. My favorites are ThermoPop and ThermoPen. I buy these as a gift for my friends and family.





# FOOD SAFETY IN RECIPES:

## Higher-level Cooking Knowledge

### Butternut Squash Soup (Serves 8-10)

#### Ingredients

2 large butternut squash, about 3 pounds each  
4 onions, diced  
1/2 cup (1 stick) unsalted butter  
2 tablespoons olive oil  
8 thyme sprigs (1/4 teaspoon dried)  
8 cups water or stock  
2 teaspoons salt, and more to taste  
1 teaspoon white pepper

#### Directions

1. ....
2. ....
3. ....
4. **Let soup cool slightly.** Pour soup, in batches, about **3/4 full into blender;** puree. **Make sure lid blender is tightly secured and covered (put hand on the top of lid before turning the machine on—don't want hot soup spraying out of blender!)** If desired, pour pureed soup through fine mesh strainer for a smoother consistency.

# FOOD SAFETY IN RECIPES: SUGGESTIONS



## Reduce clutter

- Include a food safety note at the end of recipe
- Include food safety information in the front of a cookbook

## Space constraints

- Write clear and concise recipes
- Link to food safety instructions or video within the recipe

## Cooking Videos

- Place basic food safety instructions in script

## In-person cooking classes

- Provide a separate and easy-to-read food safety sheet

## Recipe content creators

- Outreach and education: how to write better recipes and include food safety

# FOOD SAFETY IN RECIPES: RESOURCES



Multiple studies show that when consumers follow recipes that incorporate basic food safety instructions, they significantly increase food safety behaviors. This style guide provides easy edits to any recipe to improve food safety practices.

[saferecipeguide.org](https://saferecipeguide.org)



## TEMPERATURE

Cook until internal temperature reaches XX *(fill in the blank and include chart with specific foods)* on food thermometer.



## HAND WASHING

Wash hands with soap and water. *(Include this at beginning of recipe and after each touch of raw meats, poultry, seafood or eggs)*



## CROSS CONTAMINATION

Wash *(insert cutting board, counter, utensil, serving plate)* after touching raw meats, poultry, seafood or eggs)

Do not reuse marinades used on raw foods.

Do not rinse raw poultry or meat.



## PRODUCE

Gently rub produce under cold running water.

Scrub firm produce with a clean vegetable brush under running water.

## Safe Recipe Style Guide for Video Creators

Take your recipe videos to the next level!

Multiple studies show that when people follow recipes that include basic food safety instructions, they significantly increase food safety behaviors<sup>1</sup>. For example, handwashing is one of the most effective ways to prevent the spread of germs. Studies<sup>2,3</sup> have shown that handwashing can prevent 1 in 3 diarrhea-related illnesses and 1 in 5 respiratory infections.

Recipe videos that include food safety prompts will help prevent food poisoning! Food poisoning disproportionately affects young children and people who are at higher risk of foodborne illness. That might be a young child, an elderly person, a pregnant family member or a loved one with a chronic underlying health condition, like diabetes.

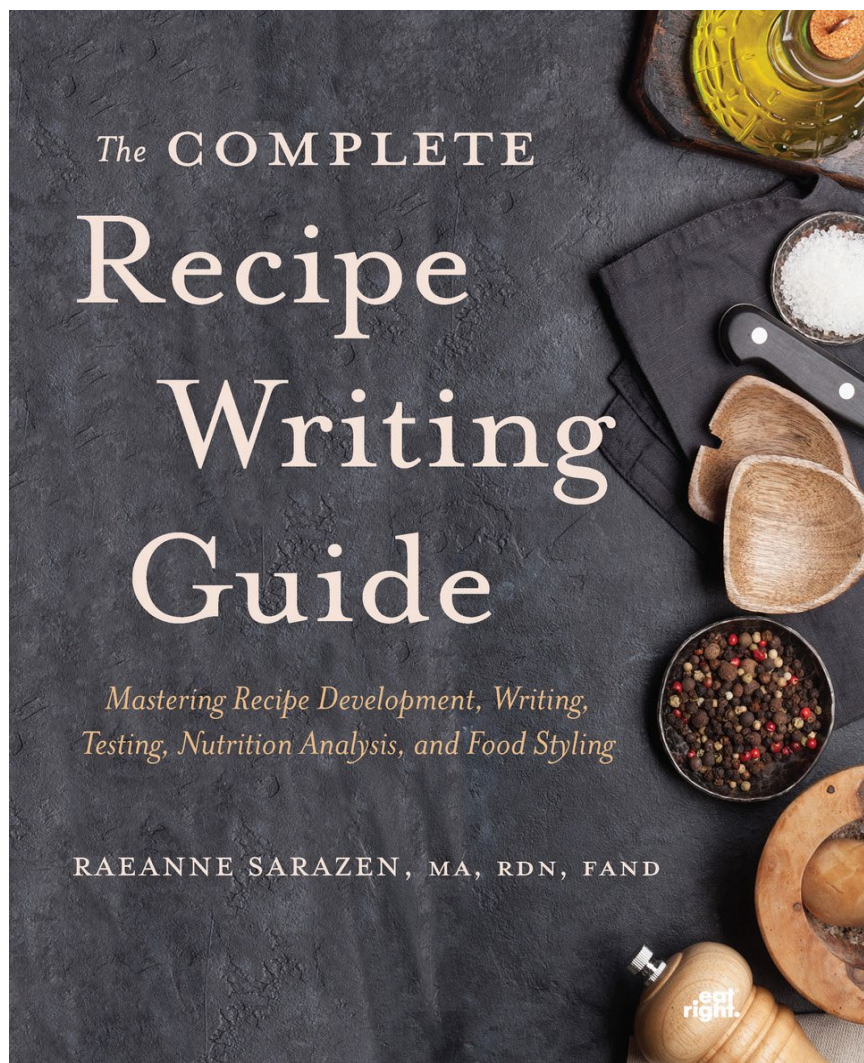
The [Safe Recipe Style Guide](#) takes you through the steps needed to add food safety prompts to written recipes. Use this handy guide to add those food safety steps into recipe videos.

HERE YOU CAN FIND A LIBRARY OF FOOD SAFETY STOCK IMAGES AND VIDEOS TO INCLUDE IN YOUR RECIPES. BELOW ARE EXAMPLES OF HOW TO USE THE IMAGES WITH THE GUIDE.

[SAFE RECIPE STYLE GUIDE FOR VIDEO CREATORS](#)

[saferecipeguide.org](https://saferecipeguide.org)





# The Complete Recipe Writing Guide

*"...the definitive master work for every aspiring and seasoned food writer, recipe developer, and cookbook editor."*

— **Jack Bishop**

CCO America's Test Kitchen

**A one-stop resource for creating professional recipe content:**

- Nutrition guidelines for recipe development
- Editorial standards for recipe writing
- Nutrition analysis, food styling, photography, video

amazon

BARNES  
& NOBLE

eat  
right.



RAEANNE SARAZEN





## CONTACT INFORMATION



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**Social media:** @rsarazen



# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



## LINKING FOOD SAFETY & NUTRITION: WHAT AND WHY?

Elisabetta Lambertini and Stella Nordhagen, Global Alliance for Improved Nutrition

Partnership for Food Safety Education, 29 Feb 2024



**USAID**  
FROM THE AMERICAN PEOPLE



**ILRI**  
INTERNATIONAL  
LIVESTOCK RESEARCH  
INSTITUTE

**P**ierce  
Mill  
entertainment  
& education

 **Busara**





# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## OUTLINE

How food safety and nutrition are linked:

- Health Outcomes
- Consumers
- Supply chains
- Policy





# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## ABOUT GAIN

The Global Alliance for Improved Nutrition (GAIN) is a Swiss-based foundation launched at the UN in 2002.

Working with both governments and businesses, we aim to **transform food systems** so that they deliver more **safe and nutritious food for all people**, especially the most vulnerable.







# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## WHERE GAIN WORKS





# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## LINKING FOOD SAFETY & NUTRITION





## FBD: SCALE & IMPACT

- **600 M illnesses**
- **420,000 premature deaths** each year, globally.
- Young children bear **40% of the burden**.
- Costs: **95 billion USD** per year in LMICs.

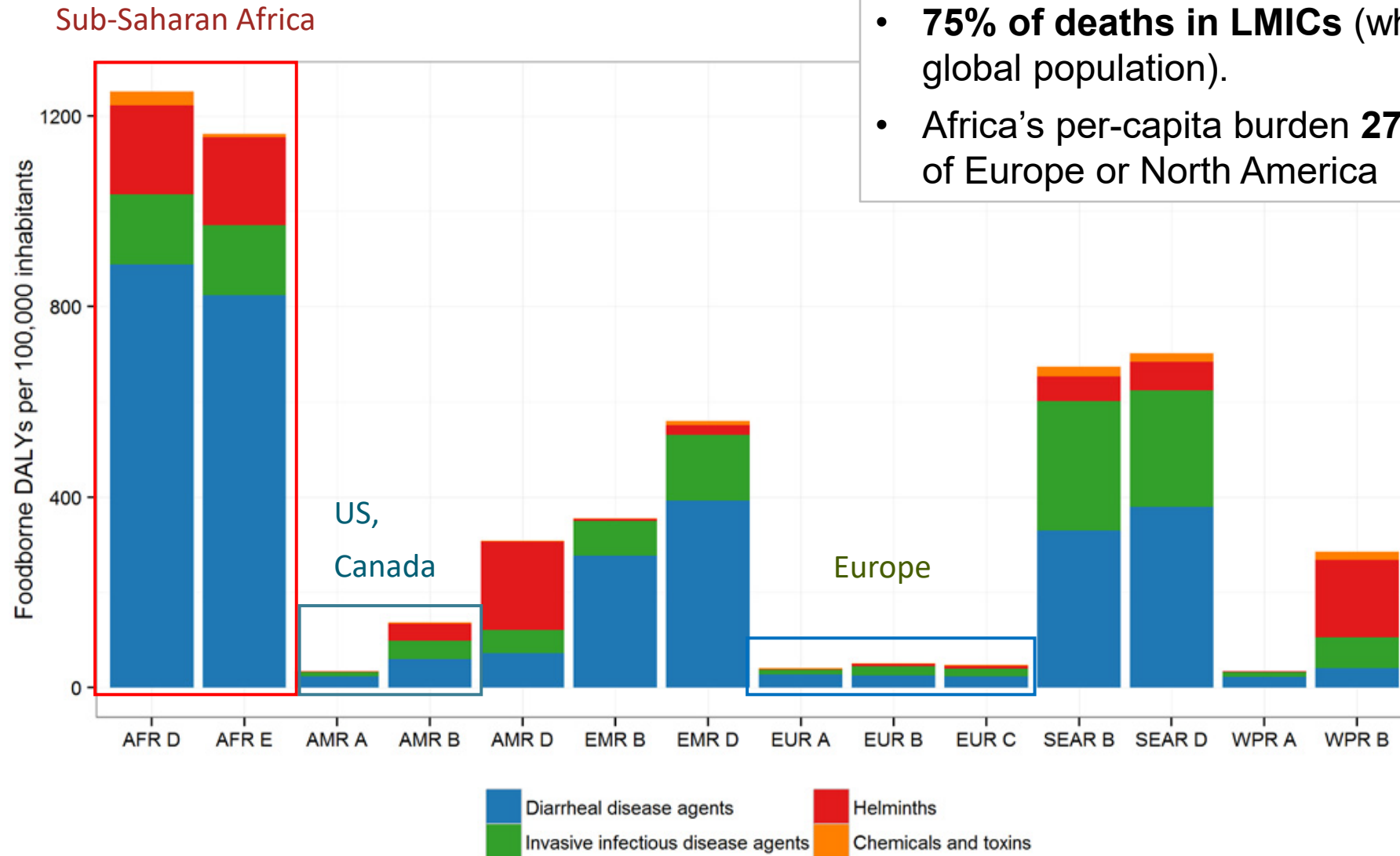
(FERG, 2015; World Bank, 2019)





# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



(FERG, 2015)





## NUTRITION

**Malnutrition:** An abnormal physiological condition caused by deficiencies, excesses or imbalances in energy and/or nutrients necessary for an active, healthy life. (FAO)

- Not enough food
- Too much food
- Wrong kind of food

## HOW DO FOOD SAFETY & NUTRITION LINK?

- Health depends on both improved nutrition and reduced foodborne illness
- The most nutritious foods often carry the highest risk
- People at greatest risk of malnutrition are also at greatest risk of foodborne illness
- Food safety and nutrition processes are closely linked
- Intervening on one can affect the other; in some cases, more effective programmes/policy can be achieved jointly



# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## FOOD SAFETY & NUTRITION LINKS

**HEALTH & PHYSIOLOGY**

**CONSUMERS**

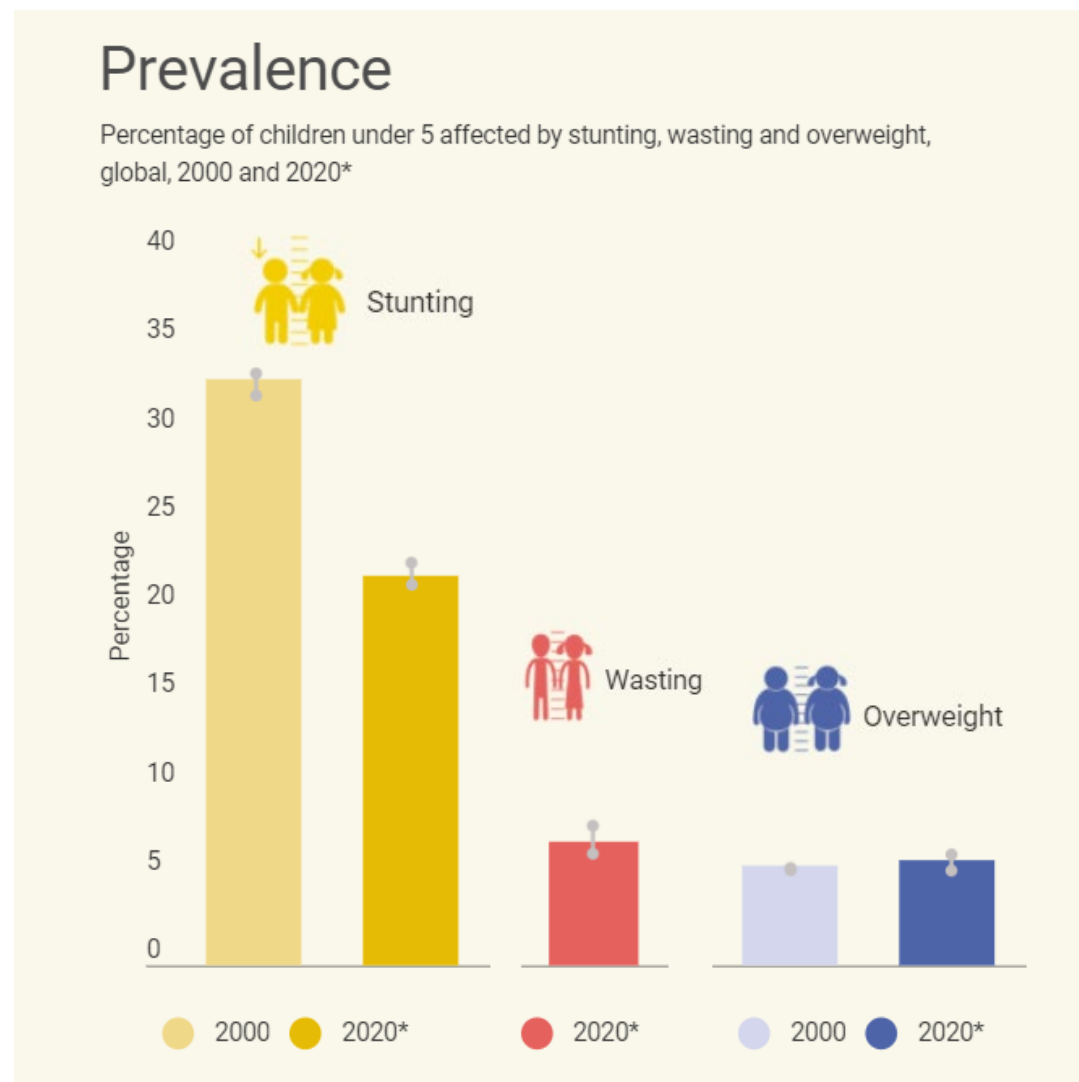
**SUPPLY CHAINS & MARKETS**

**POLICY & REGULATIONS**

## FBD AND STUNTING

- Associated with lower cognitive ability, obesity, and chronic disease
- Historically attributed solely to undernutrition
- Complex network of determinants

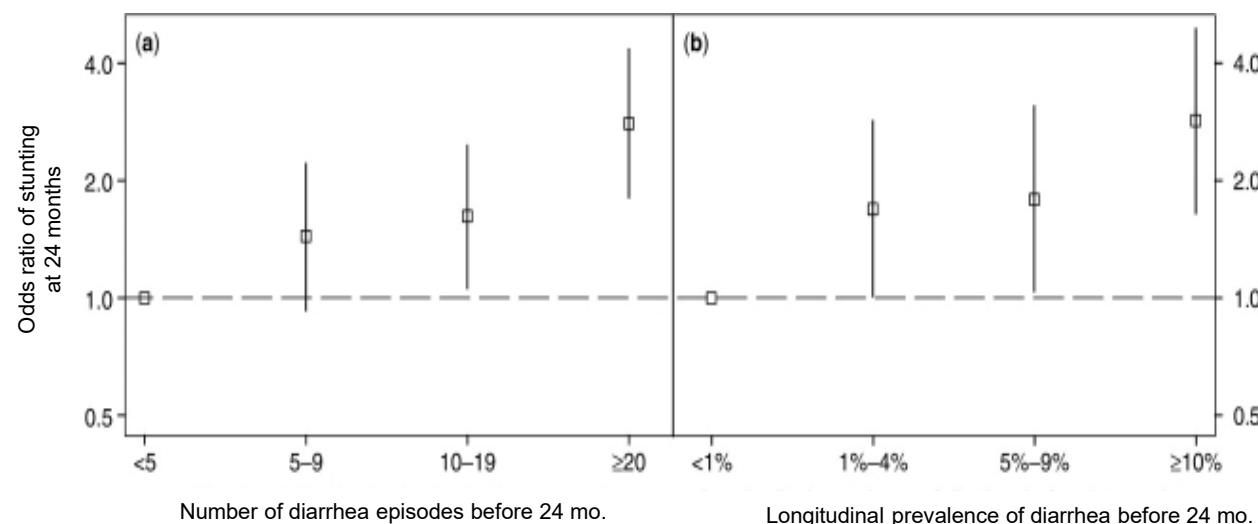
([Joint Child Malnutrition Estimates, 2021](#))





## FBD AND STUNTING

- Established association of **diarrhea** and **stunting** in children
- Not attributed to specific etiological agents

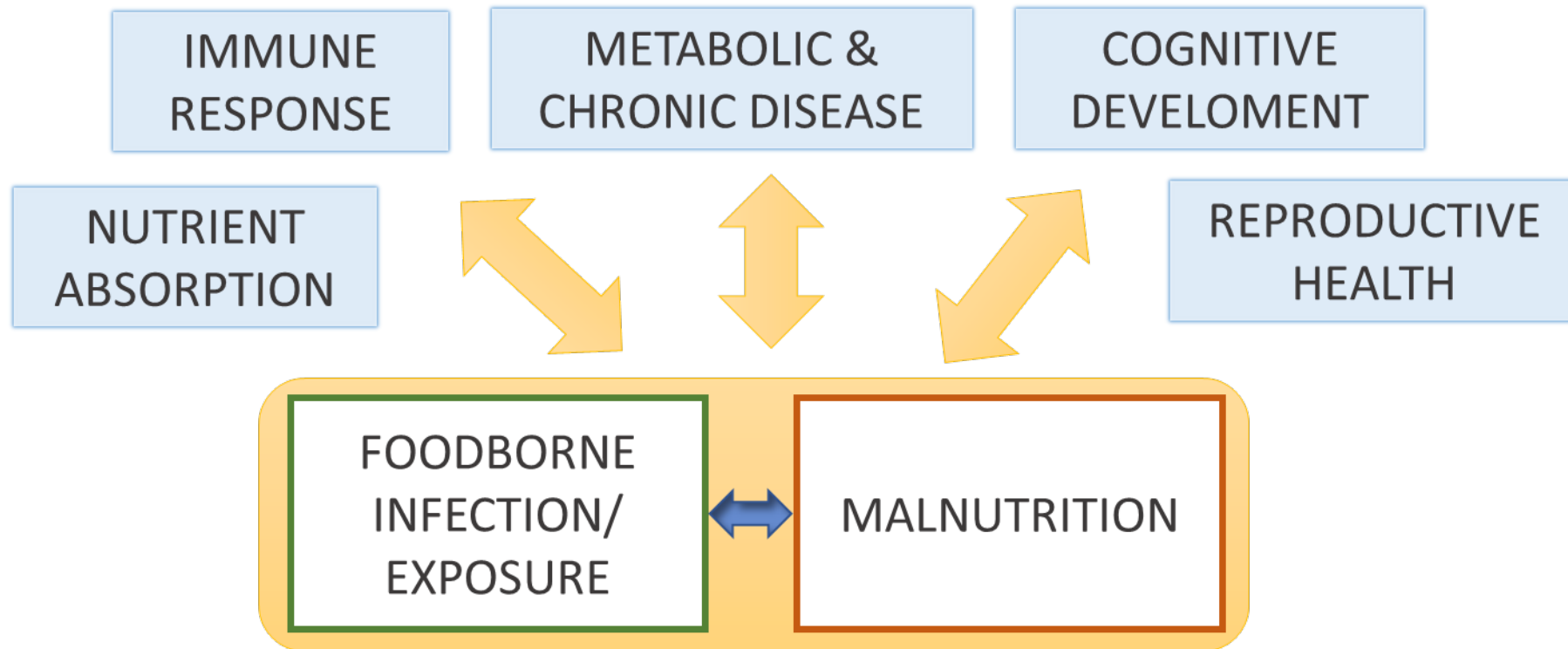


(Checkley et al. 2008, [Int J Epidemiol.](#))

- Stunting also associated with other foodborne exposure not related to diarrheal disease (e.g. mycotoxins)



## OTHER LINKED OUTCOMES





## CONSUMERS

FOOD SAFETY RISKS

- **Concern over unsafe foods** may impact diet choices
- If safer foods are more **expensive**, budget for other nutritious food may be reduced
- **Time** to select and prepare food safely may conflict with other activities

NUTRITION OUTCOMES

- Better-nourished people may be more **gainfully employed**, increasing their food budget
- Better nutrition may be associated with **higher education levels**

## EXAMPLE

Rwanda: nutritious complementary porridges (blended, fortified) are available. Why aren't people buying them?

Consumers expressed determination to blend their own, as an anti-fraud measure and to protect against illness from adulterated flours. Several ingredients for enriching flour at home (groundnut flours and ground dried fish powders) seen as having high risk of adulteration. (Lee et al. 2016)





## EXAMPLES

**Vietnam:** Consumers worry about food safety, especially fresh fruit and vegetables. Following illness episodes, consumers are quick to blame vendors; stressful for vendors, largely powerless to counter accusations regardless of whether there is a connection to their produce. (Wertheim-Heck et al. 2014)

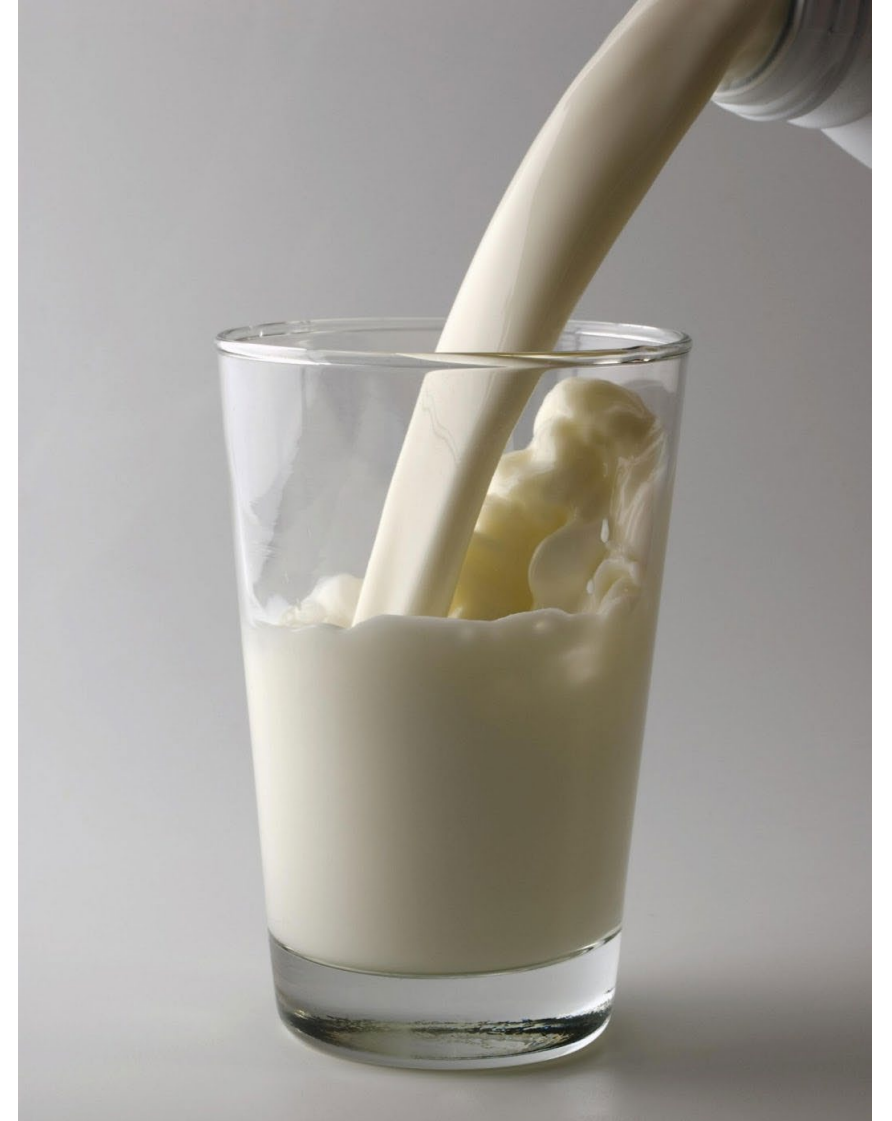
**Nigeria:** Consumers have new ways to identify vendors trained in safe food handling (EatSafe)



## EXAMPLE

**China:** In 2004, 13 babies died after drinking nutritionally inadequate formula. Government set higher standards for protein levels (nutrition policy). In 2008, deliberate addition of melamine to milk sickens thousands and kills six infants.

*(Melamine is a nitrogen-rich chemical that shows up as protein on tests for milk quality; added by middlemen to encourage purchase).*  
(Grace & McDermott 2014)



## HOW TO INTEGRATE & SUPPORT MUTUAL BENEFITS

- Focus on highly nutritious foods, considering their associated food safety risks
- Understand consumer and supply chain actors' motivations and drivers
- Consider how a nutrition intervention might impact food safety, and vice versa







# FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

## THANK YOU!

'Food and nutritional security are realized only when the essential elements of a healthy diet are safe to eat, and when consumers recognize this'  
World Bank (2018)



Elisabetta Lambertini, Ph.D.  
[elambertini@gainhealth.org](mailto:elambertini@gainhealth.org)

## Resources:

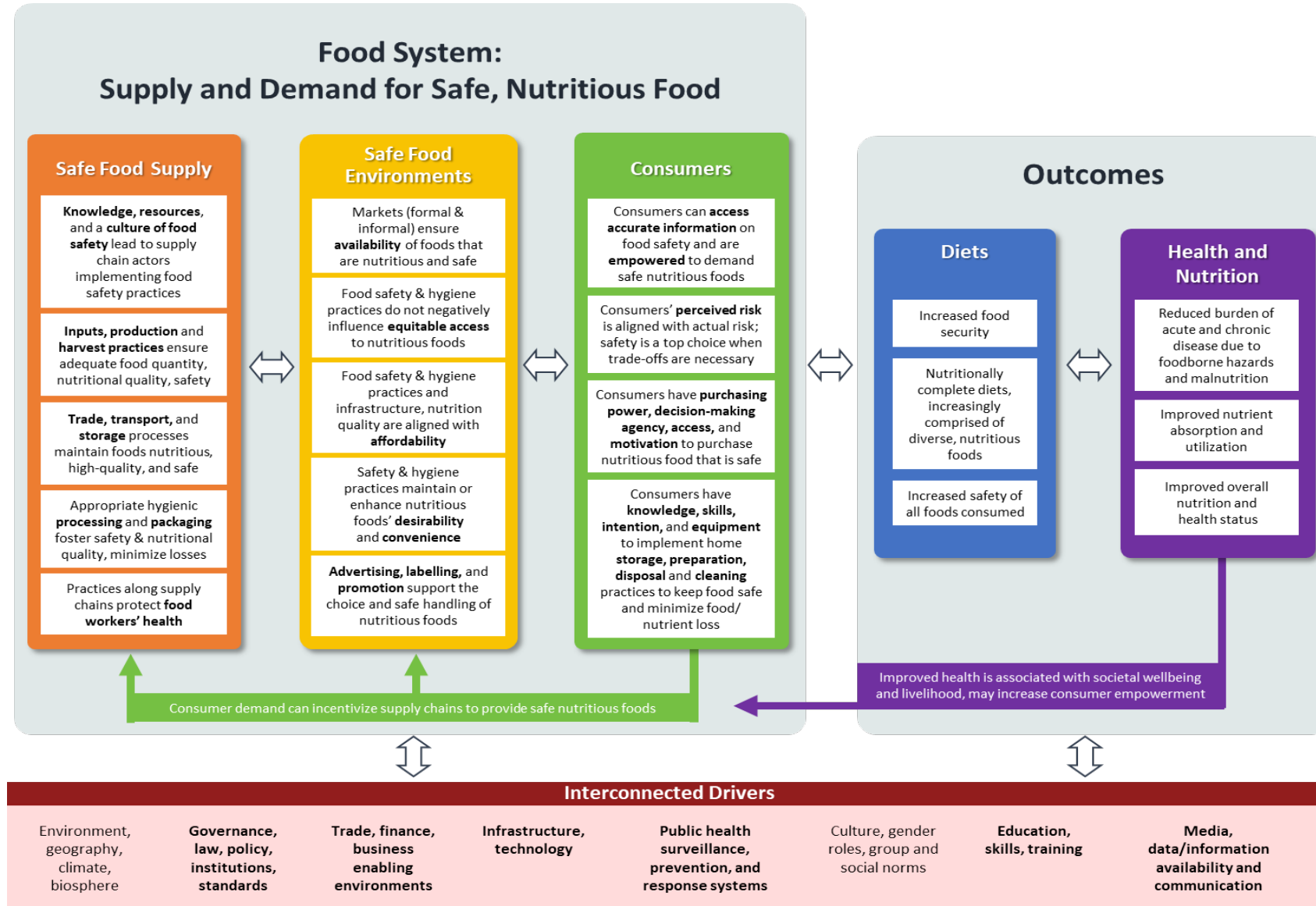
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- Lee J, Dusingizimana T, Umutoni MF. Summary of Findings - Market Research Report: Understanding Consumer demand for nutritious Food in Nyanza District, Rwanda. 2016. Unpublished report to USAID.
- Wertheim-Heck S., Spaargaren G. and Vellema S., Food Safety in everyday life: shopping for vegetables in a rural city in Vietnam. Journal of Rural Studies 34 (2014) 37-48
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# FEED THE FUTURE

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## FOOD SAFETY & NUTRITION IN THE FOOD SYSTEM



(GAIN, 2021)





## GAIN PROGRAM AREAS



### DEMAND

- Better Diets for Children
- Adolescent Nutrition
- Workforce Nutrition



### ACCESS

- Marketplace for Nutritious Foods
- Reducing Post-Harvest Loss
- Commercialization of Biofortified Crops



### ENABLING ENVIRONMENT

- Large-Scale Food Fortification
- Urban Governance for Nutrition
- Nutritious Foods Financing

Making Markets Work  
EatSafe

Keeping Food Markets Working



Nourishing Food Pathways



## EATSAFE: EVIDENCE AND ACTION TOWARD SAFE, NUTRITIOUS FOOD

Goal: to enable lasting improvement in the safety of nutritious foods in **traditional markets** by focusing on the **consumer**.

- A USAID-funded learning platform
- 5 years (2019-2024)
- Work ongoing in Nigeria and Ethiopia



## WHY INFORMAL MARKETS?

- 70% of SSA urban population acquires food from informal markets
- Especially at risk from foodborne pathogens
- Limited infrastructure (water, sanitation, storage, cold chain)
- Food safety not monitored/enforced
- Market management and different degrees of “informal”



→ **Consumer and vendor motives, behaviors, and interactions?**



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## **EatSafe Resources**

EatSafe web page:

<https://www.gainhealth.org/index.php/impact/programmes/eatsafe>

Agrilinks (to sign up for webinars):

<https://www.agrilinks.org/post/feed-futures-eatsafe-nutritious-and-safe-food-access-key-markets>





## FOOD SAFETY & NUTRITION LINKS







## HEALTH & PHYSIOLOGY

FOOD SAFETY RISKS

- Foodborne infections may cause acute or chronic reduction in nutrient intake and absorption
- Foodborne illnesses can impair metabolic processes
- Disease and treatments may disrupt the gut microbiome
- Some foodborne hazards directly impair growth and development
- Some foodborne diseases in pregnancy may harm fetal growth

NUTRITION OUTCOMES

- Adequate nutrition may increase resilience to disease and microbiome



## CONSUMERS

### FOOD SAFETY RISKS

- Concern over unsafe foods may impact diet choices
  - Both away from and towards nutritious food (e.g., away from animal-source and FFV and towards highly processed food, or towards nuts/seeds).
  - May most affect groups at high risk for malnutrition (e.g., pregnant women)
- If safer foods are more expensive, budget for other nutritious food may be reduced
- Time to select and prepare food safely may conflict with other activities

### NUTRITION OUTCOMES

- Better-nourished people may be more gainfully employed, increasing their food budget (including ability to pay for safer food)
- Better nutrition may be associated with higher education levels, perhaps improving ability to recognize and demand safer nutritious foods



## SUPPLY CHAINS & MARKETS

### FOOD SAFETY RISKS

- Reduced or unstable demand due to food safety concerns may lead to nutritious food underproduction and underdeveloped supply chains.
- Food safety measures may impact prices, perhaps leading to reduced consumption of certain foods and reduced availability to the poor.
- Vendors may sell food perceived as less risky, which may be less nutritious.
- Food safety measures in the supply chain may impact nutritional quality

### NUTRITION OUTCOMES

- Demand for nutritious foods may incentivize supply chains and vendors to improve food safety (and vice versa for reduced demand)
- Food processing (or lack thereof) to improve nutrition can affect safety
- Health and nutrition of supply chain actors influence education, productivity, possibly ability to adopt improved food safety practices



## POLICY & REGULATION

### FOOD SAFETY RISKS

- Food safety-driven recalls and market diversion may reduce supply of nutritious food (increased price, decreased access) and affect producers' livelihoods.
- Strict food safety standards may scare off suppliers and lead to under-supply (e.g. nutrient-dense but risky foods).
- Consumer trust in food safety regulations, enforcement, and compliance may increase consumption of nutritious foods once seen as 'risky'.
- Processing guidelines related to food safety may impact nutritional quality.

### NUTRITION OUTCOMES

- Nutrition policies accounting for food safety may increase demand for safer food.
- Nutrition labelling/marketing may be interpreted as safer food (and vice versa).





# FEED<sup>THE</sup>FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

[www.feedthefuture.gov](http://www.feedthefuture.gov)

*This presentation was made possible through support provided by Feed The Future through the U.S. Agency for International Development (USAID), under the terms of Agreement #7200AA19CA00010. The opinions expressed herein are those of the Global Alliance for Improved Nutrition (GAIN) and do not necessarily reflect the views of USAID or the United States Government.*



**USAID**  
FROM THE AMERICAN PEOPLE



**ILRI**  
INTERNATIONAL  
LIVESTOCK RESEARCH  
INSTITUTE



# Poll Question #2



**In your work, how often do you talk about food safety and nutrition together?**

1. All the time / Often
2. Sometimes
3. Rarely
4. Never



# Roundtable Discussion / Q&A



## Food Safety Education & Retail Dietitians



**Carrie Taylor, RDN, KYT, KMOG**

Lead Registered Dietitian  
Big Y Foods

## Incorporating Food Safety into Recipes



**Raeanne Sarazen, MA, RDN**

Chef, Writer, Editor & Consultant  
Culinary Nutrition Consulting

## Linking Food Safety & Nutrition: What and Why?



**Elisabetta Lambertini, Ph.D.**

Research Team Lead  
Global Alliance for  
Improved Nutrition

## Q&A Session Moderator



**Brittany Saunier**

Executive Director  
Partnership for Food  
Safety Education



# Food Safety Temps Magnets for Sale

- Magnets can be purchased in quantities of approximately 25, 50 or 300
- Magnets are 3.5" x 7.5," full-color, and include safe internal cooking temps for poultry, beef, pork, fish and eggs
- Only available while supplies last!
- The store is open until **Sunday, March 17**

[FightBAC.org/Magnet-Shop](http://FightBAC.org/Magnet-Shop)



A vertical magnet with a yellow top half and a red bottom half. The top half is titled "Safe Cooking Temps" and includes the text "Use a food thermometer. You can't tell food is cooked safely by how it looks." Below this, there are three rows of food items with their corresponding safe cooking temperatures: 165°F for Whole Poultry and Chicken Breast; 160°F for Ground Beef and Egg Dishes; and 145°F for Fish, \*Pork, and \*Steaks & Roasts. The bottom of the magnet includes the website www.fightbac.org, the Partnership for Food Safety Education logo, and the motto "Clean • Separate • Cook • Chill".

Food Item	Safe Cooking Temp
Whole Poultry	165°F
Chicken Breast	165°F
Ground Beef	160°F
Egg Dishes	160°F
Fish	145°F
*Pork	145°F
*Steaks & Roasts	145°F

www.fightbac.org  
Partnership for Food Safety Education  
Clean • Separate • Cook • Chill

\*with a 3 minute stand time





# PFSE Contributing Partners



Academy of Nutrition and Dietetics  
Albertsons  
Amazon  
American Frozen Food Institute  
Ardent Mills  
Association of Food and Drug Officials  
Big Y Foods, Inc.  
Boar's Head Provisions Co.  
Conagra Brands  
Costco Wholesale Corporation  
FMI Foundation  
Groundswell Strategy  
HelloFresh  
Home Chef  
Instacart

International Association for Food Protection  
International Food Information Council Foundation  
International Fresh Produce Association  
Kroger Company  
Meijer, Inc.  
MilliporeSigma  
National Association of Convenience Stores  
National Chicken Council  
National Consumers League  
National Frozen & Refrigerated Foods Association  
National Grocers Association  
National Pork Board  
National Turkey Federation  
North American Millers' Association  
NSF

Publix Super Markets Charities, Inc.  
Refrigerated Foods Association  
SmartLabel by Consumer Brands  
Southeast Produce Council  
Sysco Corporation  
Tyson Foods, Inc.  
Uber Eats  
USPOULTRY  
Wakefern Food Corp.  
Walmart  
Wayne Farms  
Wegmans  
Whole Foods Market

## Federal Liaisons

Centers for Disease Control and Prevention  
U.S. Food and Drug Administration, CFSAN  
U.S. Department of Agriculture, FSIS / NIFA



# Stay Involved with Us!

- Pay it forward — make a \$10 charitable gift
- Work with PFSE as a Contributing Partner
- Follow us on [Facebook](#), [Twitter/X](#) and [LinkedIn](#) to share our food safety messages
- [Sign up](#) for our biweekly e-card and monthly *Cooking Times* and *Lasting Lessons*

[fightbac.org/get-involved/](https://fightbac.org/get-involved/)



# Continuing Education Units



## **\*\*FINAL REMINDER\*\***

**One-hour CEU available from ANFP, CDR, NCHEC & NEHA**

- Download certificates from chat box
- Follow-up email
- Download at [fightbac.org](http://fightbac.org) under “Free Resources” tab and “Recorded Webinars”
- Educators seeking NCHEC must complete online questionnaire by **Tuesday, April 30**



# Thank You for Joining Us!

**Carrie Taylor, RDN, KYT, KMOG**  
Big Y Foods

**Raeanne Sarazen, MA, RDN**  
Culinary Nutrition Consulting

**Elisabetta Lambertini, Ph.D.**  
Global Alliance for Improved Nutrition

**Britanny Saunier**  
Partnership for Food Safety Education

