

Holiday Baking for BAC Fighters



*Promoting Home
Safe Handling of
Ingredients*

November 19, 2019

Today's Event Line-up

- **Don Kautter**, Senior Advisor, Office of Food Safety, U.S. Food and Drug Administration, Center for Food Safety and Applied Nutrition
- **Sharon Davis**, Family & Consumer Sciences Education, Home Baking Association
- Recipe demo: Hot Chocolate Cookies – based on the Safe Recipe Style Guide



www.fightbac.org | storyofyourdinner.org | saferecipeguide.org



Welcome from PFSE



Shelley Feist
Executive Director

Partnership for Food Safety
Education

www.fightbac.org

Important Housekeeping



To ask a question, please use the question box on the right of the screen.



After the webinar, you will receive a brief survey. Please fill it out.

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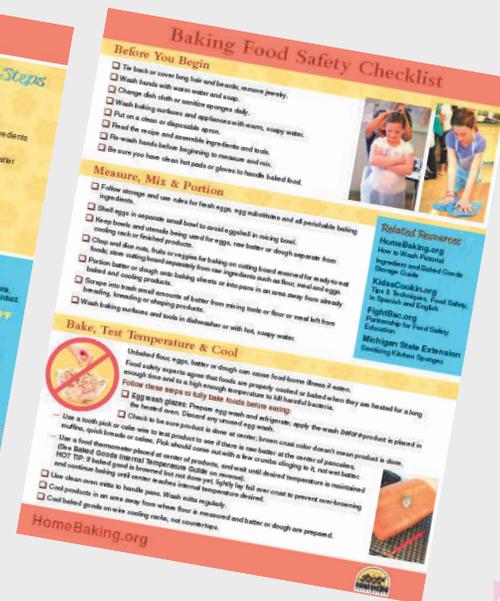
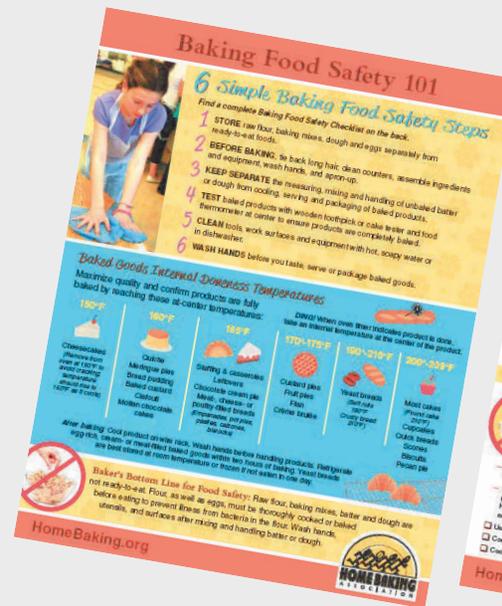
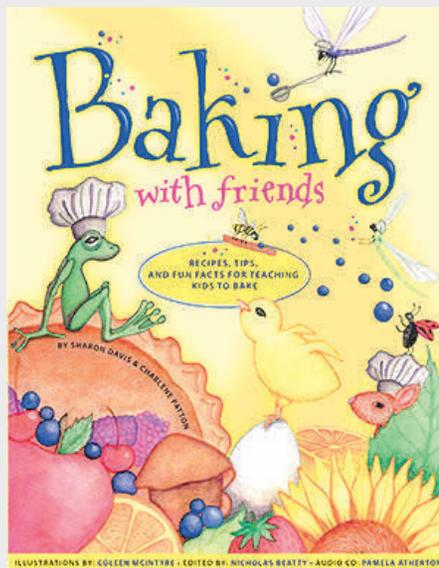


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Door Prize: One Lucky Winner!

“Baking with Friends” book & CD, Baking Food Safety Guide plus a Bakers Tool!



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Guest Speaker



Don Kautter

Senior Advisor, Office of Food Safety

U.S. Food and Drug Administration

www.fda.gov

Agenda

- Flour and shell egg safety
- Food Safety Modernization Act definition of ready to eat
- Restaurant and retail messages
- Consumer messages

Background: Flour

Recalls/Outbreaks (selected ones):

- **2009 – Pathogenic *E. coli* related recall**
 - Raw, prepackaged cookie dough
 - 77 people sick

- **2015/2016 – Pathogenic *E. coli* related outbreak and recall**
 - 45 million tons of flour (and associated products) recalled
 - At least 63 illnesses; 17 hospitalized
 - [FDA Investigation of Multistate Outbreak of Shiga toxin-producing *E. coli* Infections Linked to Flour](#)

Background: Flour, cont.

Recalls/Outbreaks (selected ones):



- **2018/2019 – *Salmonella* outbreak/recall**

- Pre-packaged cake mix suspected but not enough epidemiologic and traceback information to confirm consumption of the cake mix
- 7 illnesses
- [FDA Investigated Recalled Duncan Hines Cake Mixes Potentially Linked to Salmonella Agbeni Illnesses](#)

- **2019 – Pathogenic *E. coli* outbreak/recall**

- Flour
- 21 illnesses, 3 hospitalizations
- [Outbreak Investigation of E. Coli O26 Linked to ADM Milling Co. Flour, May 2019](#)

Background: Raw Wheat

Journal of Food Protection, Vol. 82, No. 6, 2019, Pages 1022-1027

- “Occurrence and Levels of *Salmonella*, Enterohemorrhagic *Escherichia coli*, and *Listeria* in Raw Wheat”
- Total of 5,176 wheat samples were tested
 - *Salmonella* – 1.23%
 - EHEC (*E. coli*) – 0.44%
 - *Listeria* – 0.08%
- “...our surveillance study shows that contamination of wheat with pathogens is clearly evident and poses a foodborne illness risk.”

Safety of Shell Eggs Reminder

- The FDA estimates 79,000 cases of foodborne illness and 30 deaths each year are caused by eating eggs contaminated with *Salmonella*.
 - Cook eggs until both yolk and white are firm. Scrambled eggs should not be runny.
 - Casseroles and other dishes containing eggs should be cooked to 160 °F. Use a food thermometer to be sure.
 - For recipes that call for eggs that are raw or undercooked when the dish is served —like Caesar salad dressing and homemade ice cream —use either shell eggs treated to destroy *Salmonella* by pasteurization or another approved method, or pasteurized egg products.
- [What You Need to Know About Egg Safety](#)

Ready to Eat Definition

Food Safety Modernization Act – “Current Good Manufacturing Practice, Hazard Analysis, and Risk-Based Preventive Controls for Human Food” regulation defines a ready to eat food (RTE food):

- *“Means any food that is normally eaten in its raw state or any other food, including a processed food, for which it is reasonably foreseeable that the food will be eaten without further processing that would significantly minimize biological hazards.”*
- Additional guidance on RTE and not ready to eat (NRTE) foods is coming

Poll Question #1

Are you Cookie Dough Defiant?

1. Yes, I defend eating my cookie dough!
2. No, of course not.
3. Sometimes, I admit...
4. What do you mean by "cookie dough defiant"?

Restaurant & Retail Messages



Restaurants and retailers should be aware that flour may be a source of pathogens and should control the potential for cross-contamination of food processing equipment and the food processing environment. They should follow the steps below:

- Wash and sanitize display cases and refrigerators where potentially contaminated flour was stored.
- Wash and sanitize cutting boards, surfaces, and utensils used to prepare, serve, or store potentially contaminated flour.
- Wash hands with hot water and soap following the cleaning and sanitation process.
- Retailers, restaurants, and other food service operators who have processed and packaged any potentially contaminated products need to be concerned about cross contamination of cutting surfaces and utensils through contact with the potentially contaminated flour.
- Regular frequent cleaning and sanitizing of food contact surfaces and utensils used in food preparation may help to minimize the likelihood of cross-contamination.
- Cook flour containing products as appropriate to inactivate pathogens of concern.
- [Bulletin to the Food Service and Retail Food Store Industry Regarding Flour and Products Containing Flour](#)

Consumer Messages

FDA warns against eating raw dough products made with any brand of flour or baking mix before cooking. Consumers should always practice safe food handling and preparation measures when handling flour. The FDA recommends following these safe food-handling practices to stay healthy:

- Do not eat or play with any raw cookie dough or any other raw dough or batter product made with flour that is intended to be cooked or baked.
- Follow package directions on baking mixes and other flour-containing products for proper cooking temperatures and for specified times.
- Wash hands, work surfaces, and utensils thoroughly after contact with raw dough products containing flour.
- Keep raw foods separate from other foods while preparing them to prevent any contamination that might be present from spreading.

Consumer Messages

Helpful education weblinks:

- [Raw Dough's a Raw Deal and Could Make You Sick](#)
- [Final Summary: FDA Investigation of Multistate Outbreak of Shiga toxin-producing E. coli Infections Linked to Flour](#)
- More are coming...

Consumer Messages

Confusion in the Marketplace

- Stores that specifically market and sell “raw” cookie dough as their main business
 - *“Can I replicate this recipe at home?”*
- Restaurants that sell cake-flavored milkshakes
 - *“Can I replicate this recipe at home?”*
- Online recipes and cooking shows that may not properly use ingredients
- Online recipes and children’s shows that demonstrate how to make items for kids using flour without a proper treatment
 - Flour based “play dough”
 - Restaurants may have the same issue

Guest Speaker



Sharon Davis

Family & Consumer Sciences Educator

Home Baking Association

www.homebaking.org



Engaging Baking Food Safety Education

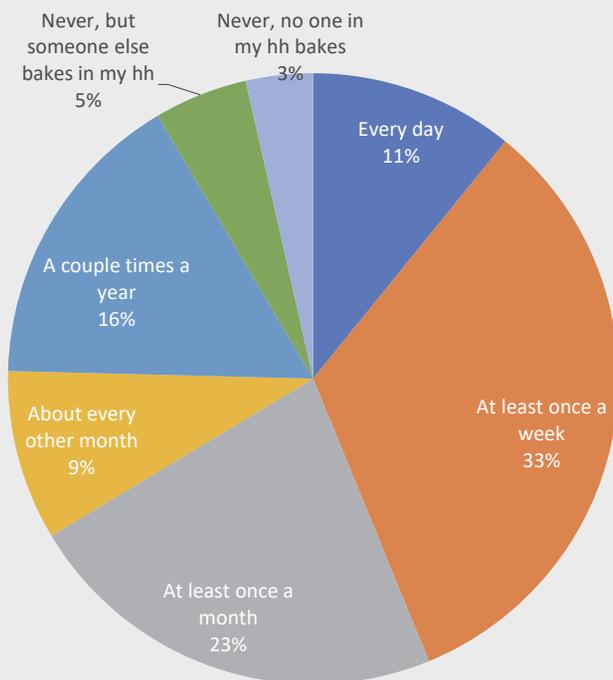


Home Baking Frequency: 2019 vs 2011



Between 2011 and 2019, some weekly bakers became daily bakers, and some non-bakers moved up to 2-6 times per year bakers.

Mintel Consulting: September 2019

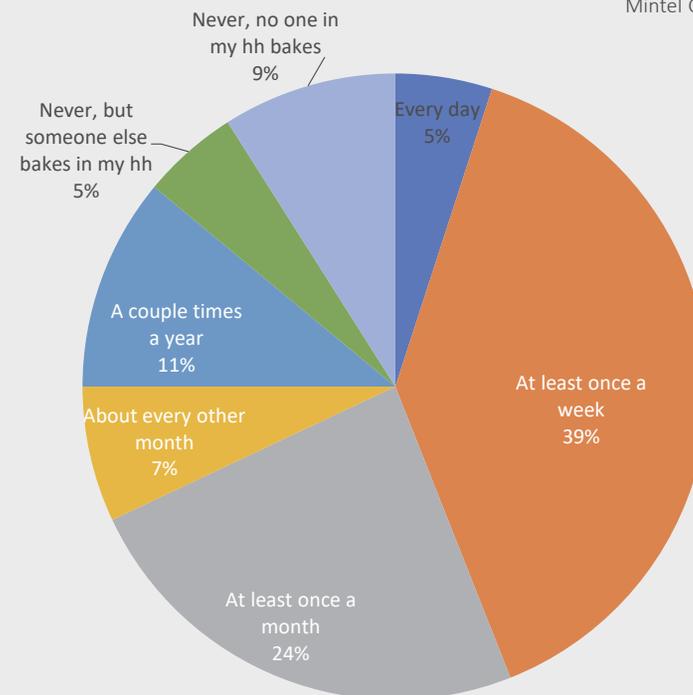


September 2019

2,000 adults; 217 daily bakers, 659 weekly bakers

“Ever bake” = 1,830, “Regular bake” = 876

Q1: How often would you say that you bake at home?



August 2011

2,000 adults; 107 daily bakers, 772 weekly bakers

“Ever bake” = 1,724, “Regular bake” = 879

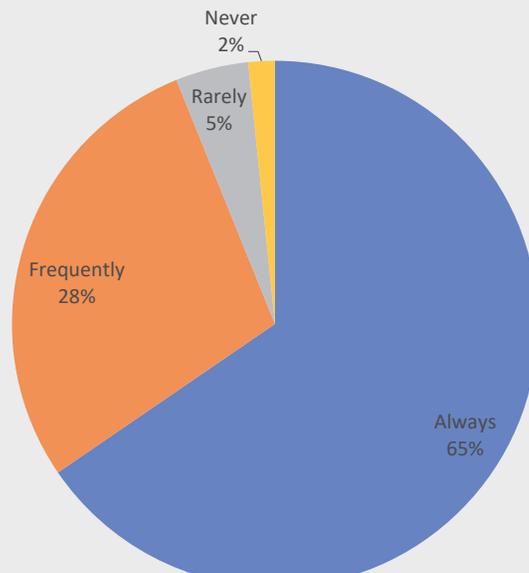
“How often would you say that you bake at home?”



HBA Consumer Baking Food Safety

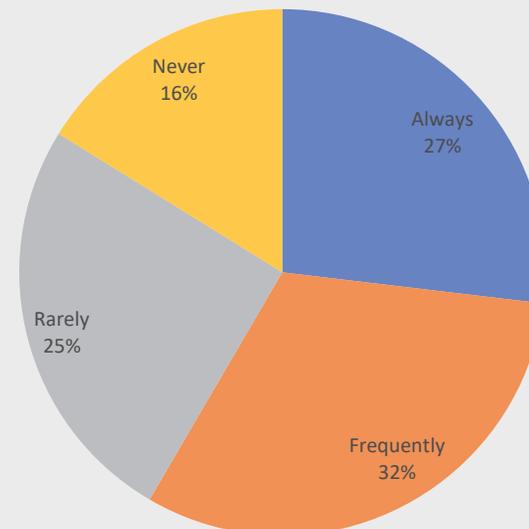
MINTEL

Q9: How often do you follow safe raw food practices when handling uncooked/unbaked flour (eg cleaning spills from surfaces before other foods are placed there, etc)? N=1,783



Nearly all bakers (93%) say that they follow safe raw food practices

Q10: When preparing dough or batter, how often do you taste it or give it to others to taste? N=1,830



Yet, 59% say that they always or frequently taste batter/dough or give to others to taste

- Most likely to “always” taste batter and dough? Daily bakers – 62% compared to 27% of weekly bakers, 22% of monthly bakers, and 19% for all other groups.
- Since there are only 217 daily bakers, the total number of people always or frequently tasting is about equally spread across all types of bakers.

Where Did You Learn to Bake? “Mom”, School, and the Internet



Mintel Consulting: September 2019

	1st	2nd	3rd	Sum of 1st-2nd-3rd
At home from a parent or relative	61%	18%	14%	92%
Any social media	-	-	-	65%
TV baking/cooking shows	11%	26%	22%	58%
Watching videos online	8%	17%	21%	46%
Home Economics or Family and Consumer Sciences class	8%	19%	12%	39%
Early childhood program	3%	5%	8%	16%
Community program (eg 4-H, Scouts)	2%	4%	7%	14%
After school program	2%	5%	6%	13%
Career/ tech school class	2%	5%	6%	13%
STEM (science, technology, engineering, math) class	2%	3%	3%	8%
	100%	100%	100%	-

Q27: How or where did you first learn to bake? Please select up to three of the first ways you learned to bake. Total of 3,489 “votes” cast.



Decline in FCS/CTE Food Prep Education Opportunities

- Home economics → Family & Consumer Sciences (1990s)
- Elective only (Ex Japan, Home Economics required)
- 20-year focus narrow set of often-tested subjects; H.S. college track pressure
- 2012, fewer than 3.5 MM students (38%↓)
- Now FCS professional shortages extension and classrooms
- Perkins V (2018) \$\$ boost
- Still elective, increasingly Career & Tech pathways
- “Adulthood” lessons now sought post-secondary; stressed, food-insecure college students

Source: AAFCS and NEAFCS Alliance Partners 11/12/2019

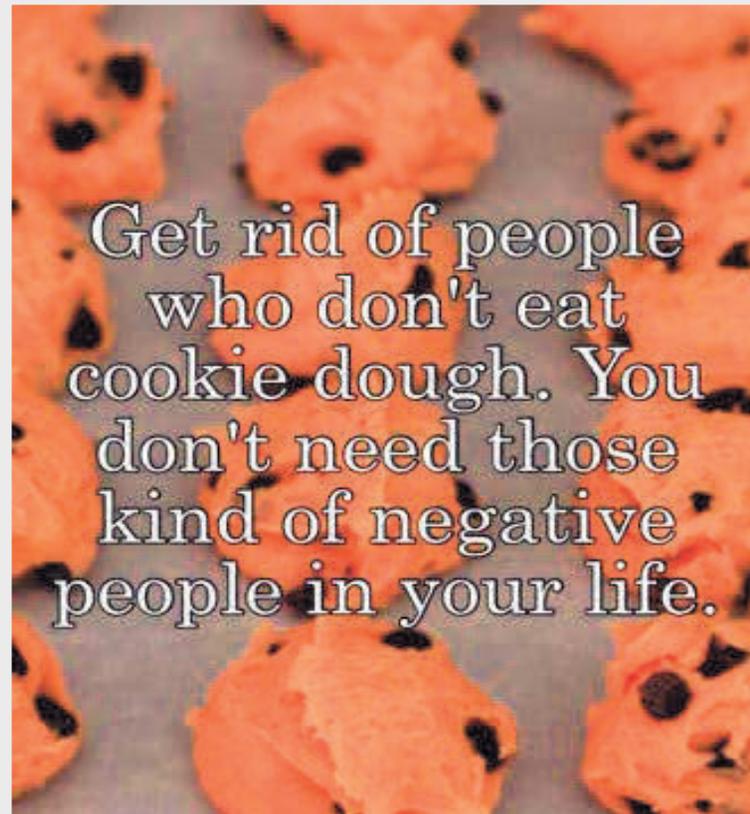
www.hppr.org/post/kansas-college-students-can-ace-tests-they-need-help-adulthood



Whitehall, WI, High School FCS Culinary
2018

Cookie Dough Defiance

Consumer defiance very real →→→



When media, commercial teaches



Book Tour NY, NJ, IL, OH, MO, CA...includes cookie dough class - SOLD OUT

October 15, 2019 release

"I'm revealing the secrets to making my edible and bakeable cookie dough at home..."

- Overviews food safety
- Tells why flour is not ready-to-eat
- No references. Bases on own experiences, w/disclaimer

Her 3 ways to make flour safe:

1. Buy her pre-mix
2. Heat flour in microwave to 165°F
3. Bake flour in 300°F oven, check every 2 minutes, stirring



Poll Question #2

Which of these delicious desserts is safe for you to make and enjoy at home?

1. Cookie Dough Ice Cream
2. Cake Batter Milkshake
3. Skillet Brownie Cookie
4. Chocolate Chip Cookie Dough Truffles

D-I-Y Flour Treatment Not New

Cooking Light Magazine, Sara Tane

July 29, 2016, (and 2018, 2019...)

<http://www.cookinglight.com/eating-smart/smart-choices/safe-to-eat-cookie-dough>

How You Can Safely Eat Raw Cookie Dough Despite Recent Recalls

“Frequent flour recalls are starting to make everyone’s favorite part of cookie making (licking the bowl clean) seem life-threatening...

...take the time to toast your flour before using it ... you not only kill any lingering bacteria, like E.coli, you add delicious nutty flavor.”

Critical Thinking for Consumers, Students:
What’s flawed in this process?



2 cups flour
Cookie sheet
350 °F
5 minutes

NOTE: Food service flours available to be eaten in raw dough products...Research ongoing for wheat treatments.



Grain is cleaned...in field by how the combine cuts and winnows it.



At the flour mill, in storage, and before the milling begins, grain is thoroughly cleaned.

Teach Farm to Kitchen Grain cleaned, *NOT* cooked or baked.



At the elevator prior to storage

Flour Mill's apply
FDA's 2018
*Food Safety
Modernization
Act* = food safety
Checks, balances

See How Flour
is Milled, KidsZone
Namamillers.org



Did You Know? Video

By NAMA and Canadian National Millers Association



Flour is a raw, agricultural commodity *until it is cooked or baked.*



Conduct Mug Muffin Lab

HomeBaking.org Poster or Download

- If “consumers love gooey...”
- Offer a portable lesson... microwave oven, simple ingredients, thermometers
- Teach “Temp at center,” “standing time, re-temp” and “doneness temp” (165 ° F. minimum)
- Critical Thinking Q: Can it be gooey AND food safe?





Baking Food Safety Lesson

Prepared by Shanna Davis, Family & Consumer Science Education, HomeBaking.org

Computer Lab One-Page Assignment
1. Go to FightBac.org
2. Draw and write a Food Safety Plan one-page. But include: site, who, what, where, and how you'll apply them food safety goals of school, or a specific facility. Use 2 weeks, 10 to 20 weeks, 2. Show w/ class or group.

Making Food Safety Sites
Guide in visiting ingredients, milk, dough, and baked goods.
Hygiene: www.fda.gov/oc/ohygiene

HomeBaking Association
How to bake grocery guides www.homebaking.org

International Food Information Council
Consumer surveys
Learn more about baking ingredients, FDA to help www.fda.gov

North American Millers' Association
View how flour is milled (both ones and old) www.namillers.org

Partnership for Food Safety Education
Learn what food items are, how it happens, and how it prevents it. www.fda.gov

Recalls, Market, Withdrawing, & Safety Alerts
Visit the reliable food recall resources www.fda.gov/oc/ohygiene

Leader Objectives: Guide participants to

1. Define new ingredients and why fully baking is essential.
2. Know personal baking food safety practices (Checklist)
3. Locate reliable consumer food safety resources.
4. Know food safety all actions to recipe they prepare.
5. Use internal food thermometer and visual cues to assure products are fully cooked/baked (minimum 160° F.)
6. Cook, handle and package or serve baked goods separately from raw flour, eggs, batter or dough.

Lesson Steps:

Step 1. View Did You Know flour food safety video.
http://www.homebaking.org/flour-food-safety-video

Critical Thinking Q: Grain is cleaned in the field by combines as it is harvested. Millers clean and temper grain at the flour mill. What is the difference between being “raw and clean” and “fully baked or cooked”? (A: Grain and flour are clean, but all raw and can carry harmful bacteria. Temperatures that kill bacteria (160° minimum) must be reached and ingredients are fully baked or cooked.)

Step 2. Read the Blueberry Mug Muffin recipe.
Critical Thinking Q: State food safety steps needed in the recipe's steps. (E.C. 1) wash hands, counters, and again in step 3) before handling baked items. 2) don't lick bowl, scrape and wash bowl, return eggs to refrigerator and flour to cupboard. 3) heat muffin at center for doneness (but Temperature Chart internal baking temperatures)

Blueberry Mug Muffin
Adapted from original recipe at bakedwithacard.com

Ingredients

- 2 Tablespoons unsalted butter
- ¼ cup all purpose flour (prefer half-whole wheat flour)
- 2 Tablespoons brown sugar
- ¼ teaspoon each baking powder and ground cinnamon
- ¼ teaspoon ground nutmeg
- 1 large egg, yolk only
- 1 Tablespoon milk
- 1 Tablespoon vanilla
- 1 Tablespoon blueberries (fresh, frozen or dried)

Directions

- 1) In a small bowl or cup, use fork to blend dry ingredients.
- 2) Place butter into large (12 oz. or larger) coffee mug.
- 3) Microwave until butter is melted, about 30 seconds. Add blended dry ingredients, yolk, milk and vanilla. Stir to blend with fork. Add blueberries, stirring and level distribution.
- 4) Microwave 10-20 seconds or until muffin pulls away from sides and top is dry. Take temperature at center - 165 ° F. minimum. (Temperature rises 5° to 10° as muffin's bakes)
- 5) Do not over cook. Cool slightly before enjoying.
- 6) Cleanup: Divide with 2 Tablespoons powdered sugar mixed with ¼ teaspoon brown juice or water. Serves 1 to 2. Nutrient: One recipe provides 170 calories, 20mg fat, 245 mg cholesterol, 280 mg sodium, 7g carbohydrates, 2g dietary fiber, 7 g protein

Step 3. To see prepare Blueberry Mug Muffin recipe.
Critical Thinking Q: Temperature Chart and food thermometer is not used in order to determine if center is done (blueberry mug muffin).

Family & Consumer Education Competencies, 2011, 3.0 (Access recipe in resource: www.homebaking.org)
Consumer and Family Resources, 21.3. Analyze decisions made for providing safe and nutritious foods for family and human services, 7.4.1 - to recognize health, wellness, and safety issues of individual and families.
Food Protection and Service, 12.2 - Develop safe food safety and sanitation practices.
Religion and Wellness, 14.4 - Evaluate foods that affect food safety from production to consumption.

Did You Know? Flour Food Safety
North American Millers Association

TO BE RESPONSIBLE TO YOURSELF AND OTHERS, YOU MUST BE AWARE OF THE PROBLEMS YOU CAN ENCOUNTER.

SO YOU SHOULD NEVER EAT RAW FLOUR

NEVER EAT THE FLOUR

DO NOT GET RAW DOUGH ON BITE!

WASH HANDS, BAKING TOOLS AND SURFACES WITH SOAP AND WATER

ONLY EAT FOOD THAT CONTAINS FLOUR WHEN IT IS FULLY COOKED

* Fully cooked is 165° F. minimum

Lesson Supply Checklist:

- o Sink, sponge, hot film
- o Microwave cover(s)
- o Microwaveable mug (one per learner)
- o Mug Muffin ingredients - 4 recipe per team
- o Food Thermometers
- o Toothpicks
- o Fork for stirring
- o Spoon (for sampling)
- o Napkins
- o Copy Baking Food Safety Checklist, one per person; pencil or pen

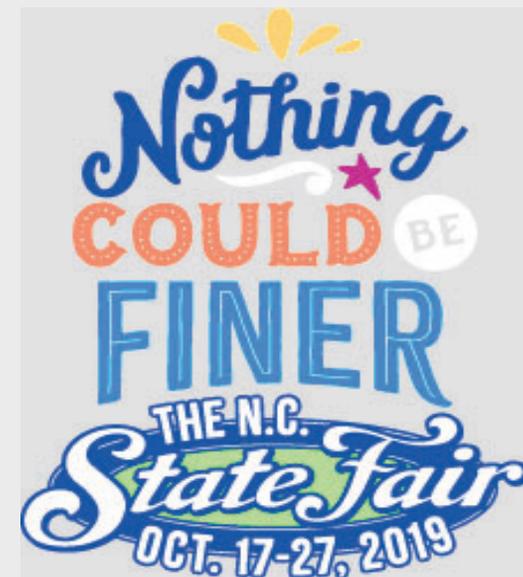
EXTRA: No microwave?
Prepare ingredients for Microwave Chocolate Cake in Mug to bake and bake at home. Identify safety steps together and call to internal responsibility to be “fully cooked” recipe developer



GOAL: Avoid Extremes, Flour Fear

Example: 2019 King Arthur Flour recall

- Cancellation of NC State Fair KA Baking Competition
- IFEA, food/baking educators can provide consumers with need to know steps
- What do baking competitions or courses need to provide?



Home Baking Association Program Goals

Identify baking food safety attitudes and practices.

Be informed by baking food safety researchers, government agencies, PFSE, field-to-kitchen industries re issues, practices and resources available.

Bring focus on *baking food safety education*

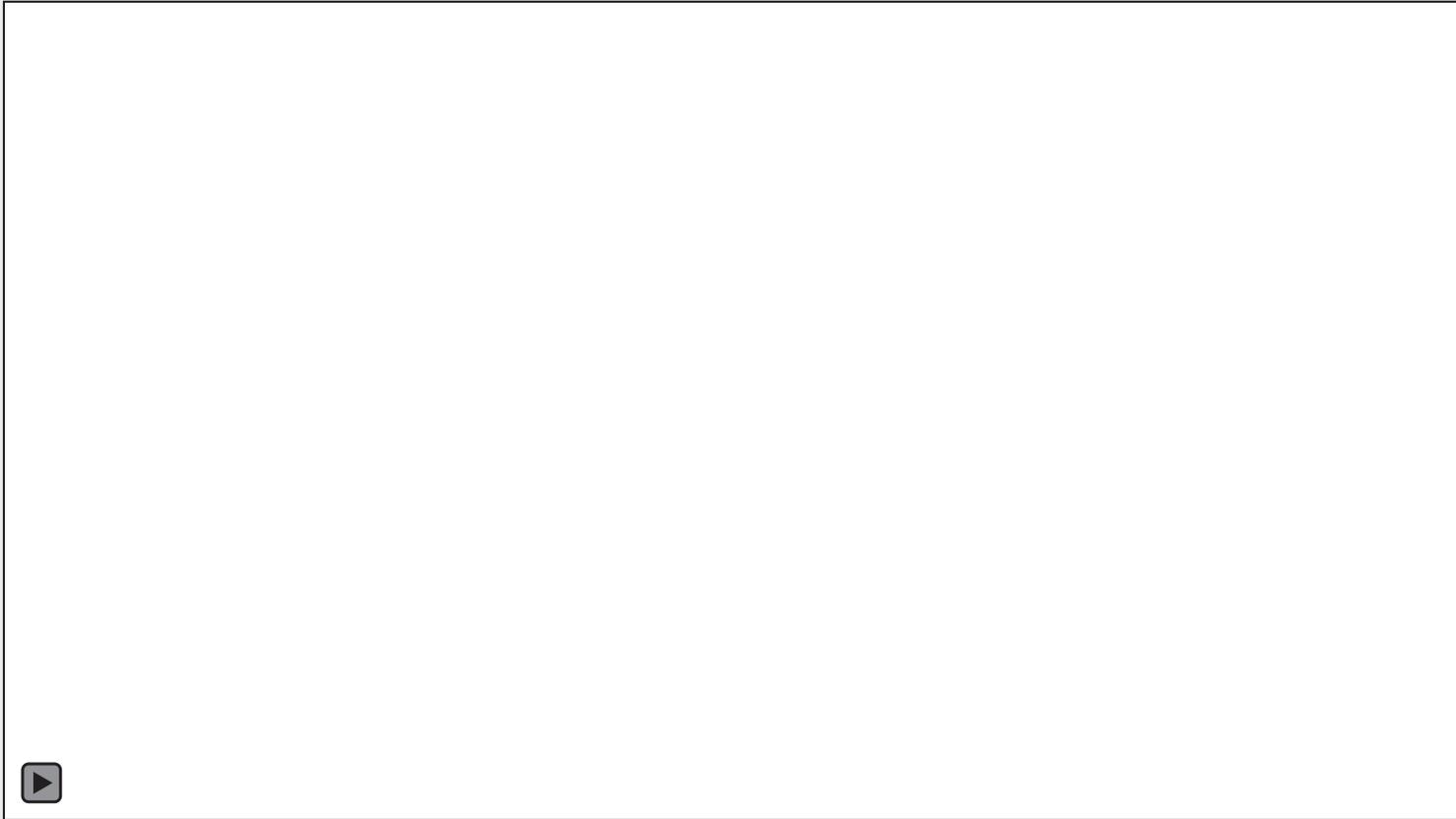
Advocate for improved, expanded training with vetted resources for application w/homes, classrooms, out-of-school programs, communities.

Teach, encourage and sustain safe food baking practices by educators who teach home bakers.

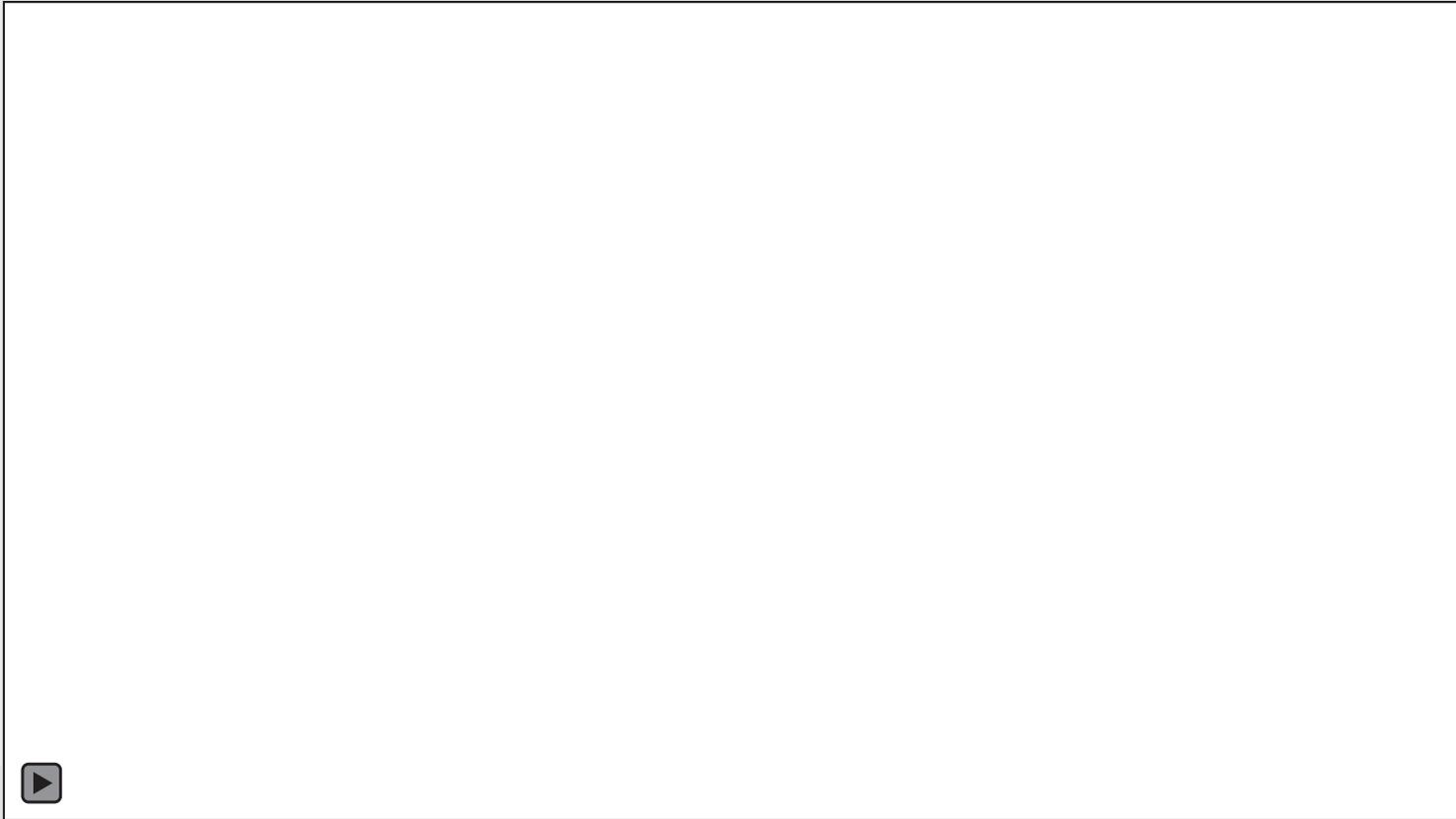
Collaborate/provide one-stop-baking-food-safety resource site.

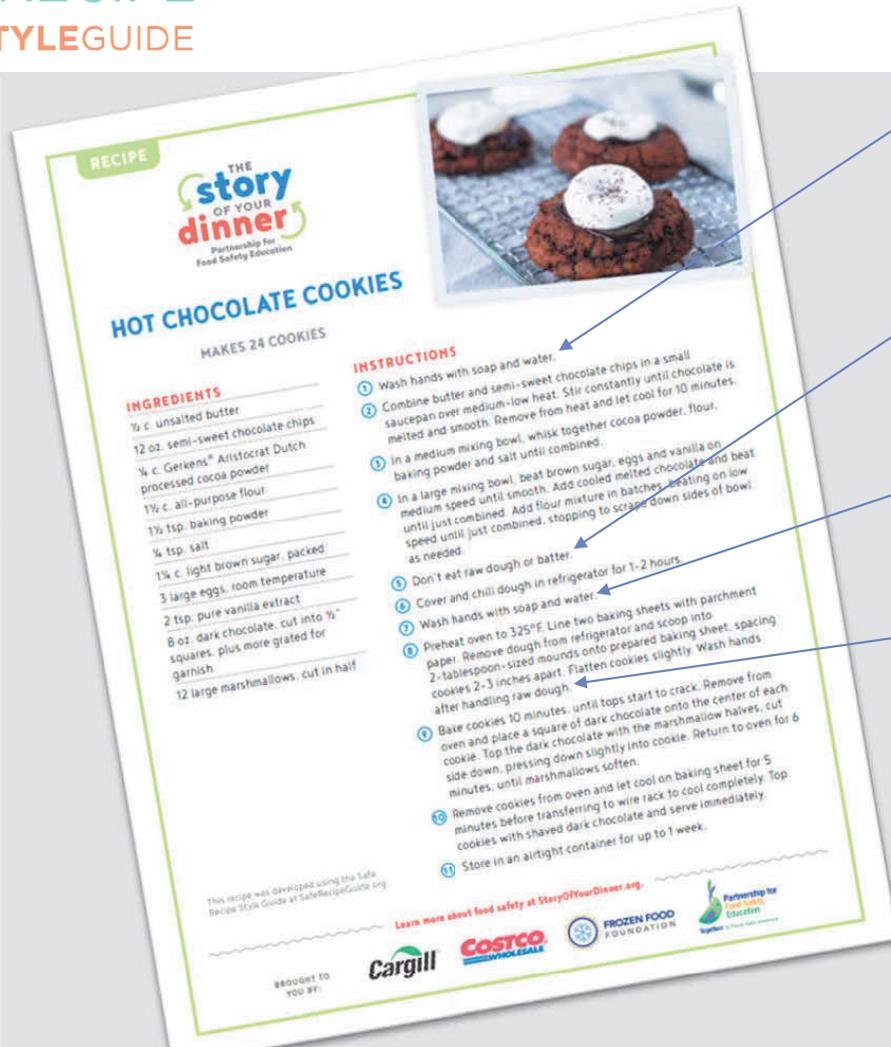


Baking with Katie, Will & Sam



Hot Chocolate Cookies Video – NEW!





Wash hands with soap and water.

Don't eat raw dough or batter.

Wash hands with soap and water.

Wash hands after handling raw dough.

SafeRecipeGuide.org



Questions?

Thank You 2019 Tier II PFSE Partners



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Thank You

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American Frozen Food Institute
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FoodLogiQ
Instacart
International Association for Food Protection
International Dairy-Deli-Bakery Association
International Food Information Council Foundation
McDonald's Corp.
Meijer, Inc.
National Association of Convenience Stores
National Chicken Council
National Grocers Association
National Pork Board

National Restaurant Association
National Turkey Federation
North American Millers' Association
NSF International
Produce Marketing Association
Publix Super Markets Charities, Inc.
Refrigerated Foods Association
Smithfield
Sysco Corporation
The Center for Food Integrity
Tyson Foods, Inc.
United Fresh Produce Association
Walmart

Federal Government Liaisons

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



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2. Follow-up email
3. Download at fightbac.org under “Events” tab and “Webinar Recordings”



www.fightbac.org | storyofyourdinner.org | saferecipeguide.org



Thank You, Speakers!



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