



# OPERATIONAL CONSIDERATIONS FOR PROVIDING GLUTEN-FREE MEALS



**National Celiac Association**

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# OPERATIONAL CONSIDERATIONS FOR PROVIDING GLUTEN-FREE MEALS

## Presenters:

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National Celiac Association, Needham, MA



# DISCLAIMER

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- This presentation is for informational purposes only. It does not replace food safety and allergen training or gluten-free (GF) certification. It is supposed to give you an **overview** of what you may need to consider when providing GF meals. Risk levels of individual facilities will vary.



## National Celiac Association



# AGENDA

- Gluten 101
- What are Gluten-Free (GF) foods?
- Deciphering the label: GF what does it mean?
- Creating a GF meal: from purchasing through serving
- New Resources & Upcoming Trainings



# LEARNING OBJECTIVES

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- Be able to identify foods that are GF.
- Be able to describe what the term GF means on product labels.
- Be able to identify key risk areas in the kitchen, and understand how to prevent cross-contact and keep food GF from purchasing to serving.



# POLL

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**Which of the following is NOT gluten-free?**

- A. Buckwheat
- B. Spelt
- C. Sorghum



# POLL ANSWER

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Answer: Spelt





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## Gluten 101

# WHAT IS GLUTEN?

Gluten is the most common protein in the human diet. It can be found in these grains:

- Wheat (gliadin)
- Barley (hordein)
- Rye (secalin)



Gluten brings elasticity and structure to baked goods. It is what makes them fluffy and chewy all at the same time. This is why GF products often are crumbly. <sup>1</sup>



# NOT SAFE

- **Wheat**

- Bulgur
- Couscous
- Durum
- Emmer
- Farina
- Semolina
- Triticale

- **Ancient Wheat**

- Spelta
- Small spelt/Spelt
- Kamut
- Einkorn

- **Barley**

- Malt - malt extracts, malt vinegar, malt syrup, malt flavoring (almost always from barley)
- Brewer's yeast

- **Rye**

- Secale <sup>1</sup>

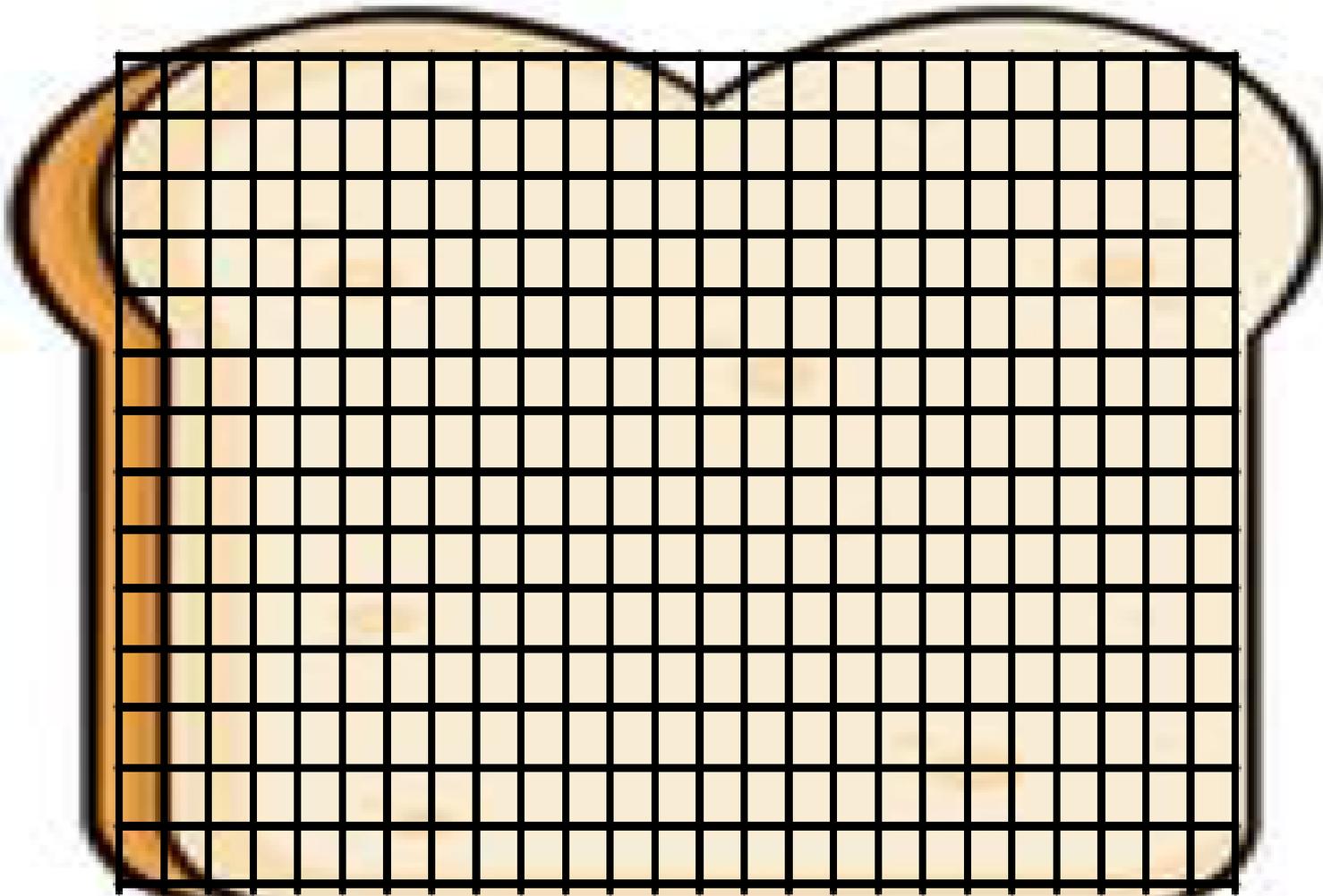


# HOW MUCH GLUTEN?

- There is no official threshold for gluten consumption, however one study determined that a daily intake of 10 mg of gluten was the threshold that produced damage to the small intestine in individuals with CD
- How much is 10 mg?



# 1/350 OF SLICE OF BREAD



# TREATMENT

- The **ONLY** approved treatment for celiac disease (CD) is a **STRICT GF** diet.





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What are Gluten-Free Foods?

# NATURALLY GF FOODS

All fresh and unprocessed:

- Fruits and Vegetables
- Plain Meat, Fish, Poultry
- Eggs
- Milk
- Cheese
- Rice (plain)
- Corn
- Potatoes
- Legumes – beans, lentils, chickpeas
- Seeds and Nuts



# GLUTEN-FREE GRAINS/FLOURS/STARCHES



- Rice
- Corn
- Potato flour

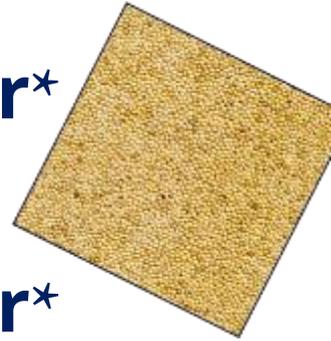


- **Quinoa\***
- **Millet\***
- **Amaranth\***



- Arrowroot
- **Buckwheat\***

- **Chestnut flour\***
- **Lentil flour\***
- **Chickpea flour\***
- Sago
- Cassava
- **Sorghum\***
- Soy
- Tapioca
- **Teff\*** 1



Emboldened items with an asterisk are more nutritious and higher in fiber and/or nutrients. <sup>1</sup>



# OATS

- **Beware:** Most commercially available oats in the USA are heavily contaminated through crop rotation, processing and transportation with forbidden grains.
- **GF Oats** are considered safe for *most* people with CD. NCA recommends those that are consistently tested <20 ppm gluten. <sup>1</sup>



# FOODS THAT ALMOST ALWAYS CONTAIN GLUTEN

- Breads/crackers/cookies/pastries
- Pasta
- Sauces and thickeners
- Broths and soups
- Soy sauce
- Spice mixes and flour dusting
- Salad croutons
- Breaded or battered foods
- Fried foods (fried in non-dedicated fryolator)
- Vegetables cooked in pasta water



# WHAT IS CONSIDERED GF?

- The Food and Drug Administration considers food to be GF when it contains less than 20 parts per million (ppm) <sup>3</sup>
- 20 ppm = .002%
- 20 ppm = 20 mg/kg
- A 1 ounce slice of GF bread would contain 0.57 mg of gluten <sup>4</sup>



# GF LABELING LAWS

- The FDA requires foods that are labeled GF to contain less than 20 ppm of gluten.
- **NOTE: GF labeling is voluntary**
- **Food manufacturers are not required to indicate all sources of gluten on the label, or indicate GF status**
- The FDA is not mandating the use of a specific GF label <sup>3</sup>



# FDA FOOD ALLERGEN LABELING & CONSUMER PROTECTION ACT (FALCPA)

Labeling law requires to list 8 top allergens:

- **Wheat**
- Milk
- Eggs
- Soy
- Fish
- shellfish
- Peanuts
- Tree nuts <sup>5</sup>



- NOTE: Barley and rye are not listed as major allergens. Wheat-free does not necessarily mean GF! <sup>1</sup>



# VOLUNTARY ALLERGEN ADVISORY STATEMENTS

- “Processed in a facility/on shared equipment that also processes wheat.”
- Foods **labeled GF** must contain <20ppm of gluten regardless of ingredients or cross-contact.
- Foods NOT labeled GF – safety must be determined on individual basis
- Contact manufacturer for detailed information about processing procedures <sup>1</sup>



# CONFUSING INGREDIENTS

- **Modified food starch/starch** - Usually from corn, if from wheat, it will be listed on the label. Rye and barley are not used as starches in food.
- **Flavorings** - Natural/artificial flavorings may contain malt (rarely) or wheat; if from wheat, it will be listed on the label (may be in cereals, butterscotch, sweetened beverages, tea, or soy milk).
- **Seasonings** - May contain wheat as a binder or filler, but would have to be declared on the label.
- **Caramel coloring** - Usually from corn, if from wheat it will be declared on the label. <sup>1</sup>

Link to confusing ingredients: <https://nationalceliac.org/celiac-disease-resources/confusing-gluten-free-diet-ingredients>



# CONFUSING INGREDIENTS

- **Dextrin** - Usually from corn, if from wheat it will be declared on the label.
- **Maltodextrin** - Usually made from corn, if from wheat it will be declared on the label. <sup>1</sup>
- **Soy Sauce** - many contain wheat, if from wheat it will be declared on the label
- **Smoke Flavoring** – may contain malt
- **Yeast extract or autolyzed yeast extract** – may contain malt <sup>1</sup>

Link to confusing ingredients: <https://nationalceliac.org/ceciac-disease-resources/confusing-gluten-free-diet-ingredients>





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## Creating A Gluten Free Meal

# WHAT IS GLUTEN CROSS-CONTACT?

- Gluten **cross-contact** is when gluten is transferred to a food that is GF, making it unsafe for someone with CD/gluten disorders.
- Examples: crumbs on a work surface, flour on equipment, using the same utensil to stir two pots at the same time, flour on hands etc.
- Note that **cross-contamination** is different and happens when a bacteria or virus is transferred to a food.



# MENU PLANNING

- The healthiest GF meals are based on naturally GF foods with just a few supplementations of specialized GF products such as GF bread, GF pasta etc.
- Make substitutions that are GF for all foods such as thicken soups and sauces with cornstarch instead of flour
- Think international, many ethnic cuisines have a lot of GF options:
  - Indian
  - Mexican
  - South American



# COST EFFICIENCY

- Focus on naturally GF staples and supplement with just a few specialized GF products.
- Some budget, discount and big box stores carry GF products.
- Many grocery stores sell their own GF products such as pasta and cereal, or label where regular items are GF.
- Search for coupons.
- Stock up when there is a good sale.
- Outside of baking, virtually all recipes can be adapted to being GF.



# ITEMS FOR GF EMERGENCY FOOD BAG

- Not suitable as regular substitution for GF meal
- **ALWAYS read labels / ideally look for GF label**
  - Plain canned fruits, vegetables, beans, lentils, chickpeas
  - Rice & quinoa / some boxed rice & quinoa meals
  - Some canned goods (soups, baked beans )
  - Canned tuna & chicken
  - GF corn & rice based dry cereals (avoid barley malt flavoring)
  - Instant mashed potatoes
  - Polenta / grits
  - Apple sauce, rice pudding, fruit cups
  - Pasta sauce
  - Nuts / seeds / trail mix
  - GF Pasta / GF mac & cheese – store brands are cheaper
  - Shelf stable GF bread (expensive & relatively short shelf life)



# PURCHASING

- Check food labels carefully for GF status when ordering every time:
  - Manufacturers can change their ingredients at any time without notifying the public.
  - Beware of substitutions



# RECEIVING

- Inspect packages for damage
- Check for cross-contact with gluten ingredients e.g. conventional flour
- Re-check labels for GF status
- Beware of substitutions



# STORAGE

- Always store GF items **above** gluten-containing items
- Preferably use a separate area for GF foods
- Beware of conventional flour – it disperses easily in the air
- Label GF foods
  - This makes it very easy for staff to identify items quickly from storage
  - Decreases risk of cross-contact from “double-dipping.” Common items at risk for this include butter, jam, baking powder, sugar, etc.
  - Have dedicated containers for these items.



# STAFF

- Train staff on GF food preparation/cross-contact
- Assign a specific person to prepare GF meals
- Wash hands and use new gloves before handling GF foods
- Use a clean apron



# POLL

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## **Which of the following will get rid of gluten?**

- A. Cleaning with soap and water using dedicated equipment
- B. Spray with bleach
- C. Heat at temperatures above 400 degrees



# POLL ANSWER

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Answer: Cleaning with soap and water using dedicated equipment



# REMOVING GLUTEN

- Important points to note:
  - Gluten is a protein and cannot not be destroyed
  - Gluten is not a microorganism, therefore disinfecting or sanitizing surfaces will not kill it
  - Gluten cannot be destroyed by heat from stove, oven, fryer, grill or microwave



# REMOVING GLUTEN CONT.

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- Color code cleaning equipment to prevent cross-contact with equipment that has been used to remove gluten, such as cloths and brushes that have crumbs and dough stuck to them
  - Use clean cloths
- Use a water and detergent solution to remove crumbs and debris on surfaces



## REMOVING GLUTEN CONT.

- Washing, rinsing and sanitizing plates, utensils/equipment in a three-compartment sink or in a dishwasher is adequate to get rid of gluten
  - Does not apply to:
    - Difficult to clean items e.g. strainer/colander, sifter and porous materials such as wooden utensils, wood cutting boards, or rolling pins, they need to be dedicated for GF cooking
    - Color coding will help keep these separate



# MEAL PREPARATION

- Set up a **separate** station/area for GF meal preparation
- Clean all surfaces such as counters and cooking surfaces
- Preferably use dedicated color coded equipment for GF meal prep, although adequate cleaning will remove gluten from most items.
- Difficult to clean items e.g. strainer/colander and sifter, and porous items e.g. wooden utensils must be dedicated GF. Color coding is useful to keep these separate.



# MEAL PREPARATION

- Place GF items on aluminum foil when toasting
- Clean grill/use aluminum foil
- Turn convection feature off oven while cooking GF foods
- Use a dedicated fryolator with clean oil
- Do not steam, bathe, or warm vegetables over regular pasta water
- Do not bake with regular flour at the same time as preparing GF meals. **Note:** Flour can take 24-48 hours to settle completely



# SERVING

- Use clean tools and plate separate from other foods
- Serve GF food on a different shaped or color plate than regular food to keep it separate from the regular meals



# DELIVERY

- Clearly mark containers and bags for delivery
- GF meals should be in a separate part of the vehicle when delivering
  - If that is not possible, put them on top of all the other meals
- Confirm GF status with client when serving/delivering meal



# RESOURCES

NCA represents and serves individuals with celiac disease and gluten-related disorders.

- Chapters, Local Partners, Resource People (40+ groups and growing)
- Gluten-Free Food Bank (GFFB)
- Semi-Annual Symposium
- Phone hotline 5 days/week
  - 1-888-4-CELIAC
- Check out NCA's website for more resources:  
<https://nationalceliac.org/>



# TAKE HOME MESSAGES

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- The only treatment for CD is a GF diet.
- There are many foods that are naturally GF.
- It is important to read labels to determine if a food is GF.
- It is possible to serve GF meals in a shared kitchen with the appropriate precautions to avoid cross-contact with gluten when storing, preparing and serving GF foods.



# CALL TO ACTION

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- Practice reading labels to determine GF status of foods.
- Dedicate an area/station in the kitchen for GF meal preparation.
- Establish procedures for GF meal preparation.
- Train staff on the procedures of preparing GF foods and re-train staff whenever there is a change in staff or management.
- Keep signs up on the walls in storage room and meal prep areas as a reminder of safe GF storage and prep methods.



# REFERENCES

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**The National  
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**New Training and  
Resources**

# NEW RESOURCES

- Be sure to check out our new resources created to support your ability to offer GF meals at your facilities.
- Log on/join NRCNAengage, our social networking platform to download these today!

## Celiac Disease THE FACTS



The National  
Resource Center on  
Nutrition & Aging

### GLUTEN-FREE MEAL PREPARATION GUIDELINES

In addition to avoiding wheat, barley, rye and contaminated oats when serving someone that follows a gluten-free (GF) diet, it is essential to avoid all contact with gluten.

- Train all staff in GF procedures and re-train whenever there is a change in staffing or management.
- Assign one staff member to prepare GF meals at each shift.
- Where possible, establish a dedicated GF station in the kitchen.
- Clean all surfaces, including counters and cooking surfaces.
- Staff should wash hands, re-glove and wear a clean apron before starting a GF order.
- Read all labels to determine GF status of all ingredients used.
- Use clean equipment, utensils and tools. Using dedicated color-coded equipment preferred.
- Difficult to clean items **MUST** be dedicated e.g. colander, sieve, and equipment made from porous materials e.g. wood utensils.
- Use aluminum foil when toasting or grilling on non-dedicated equipment.
- Cook GF items separately in the oven and turn convection feature off.
- Use a dedicated fryer with clean oil when deep frying.
- Do not steam or warm vegetables in pasta water or over pasta pots.
- Store GF items separate and above GF foods.
- Serve GF food on different shaped or colored plate.
- Clearly mark containers and bags for delivery.



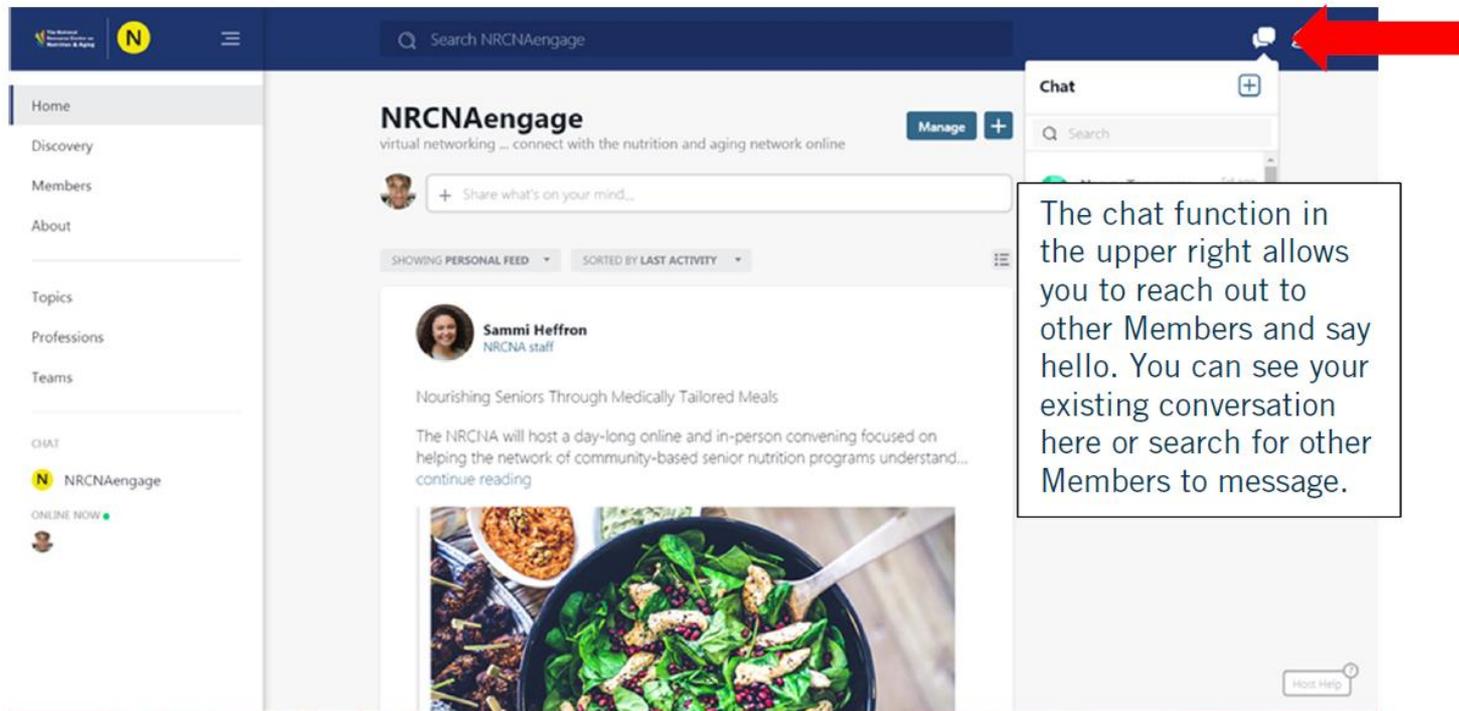
For more resources, research, education and training, please visit:

<http://www.nationalceliac.org/> & [www.nutritionandaging.org](http://www.nutritionandaging.org)



# NRCNAengage

- Visit: [www.nrcna.mn.co](http://www.nrcna.mn.co) to sign up today!



The screenshot displays the NRCNAengage website interface. The top navigation bar includes the NRCNA logo, a search bar, and a chat icon highlighted with a red arrow. The main content area shows a post by Sammi Heffron, NRCNA staff, titled "Nourishing Seniors Through Medically Tailored Meals". The post text reads: "The NRCNA will host a day-long online and in-person convening focused on helping the network of community-based senior nutrition programs understand... continue reading". Below the text is a photo of a bowl of food. A chat window is open on the right side of the page, showing a search bar and a list of members to message. A text box explains: "The chat function in the upper right allows you to reach out to other Members and say hello. You can see your existing conversation here or search for other Members to message."



# NEW: MEDICALLY TAILORED MEALS RESOURCE HUB

Visit: <https://medicalmealsconvening.com>



Convening Videos

## Nourishing Seniors Through Medically Tailored Meals

A National Resource Center on Nutrition and Aging Convening - August 8, 2019



The NRCNA hosted a day-long online and in-person convening focused on helping the network of community-based senior nutrition programs understand best practices, current challenges and emerging opportunities in the provision of medically tailored meals targeted at older adults. Attendees discussed and developed a vision for the future of specialized meal services, networked with peers from across the country, identified needed training

tools and resources, and articulated a plan of action to inspire and guide continued efforts in the provision of targeted meal services for chronically ill older adults. On this page, we have archived the presentations given at this event as well as key resources to support continued action by community-based senior nutrition programs seeking to offer meals that address both the nutritional and medical needs of older adults.



# NEW: MEDICALLY TAILORED MEALS RESOURCE HUB

What can you find here?

- Convening Report Out
- Speaker Videos
- Key Research Reports

**Nourishing Seniors Through Medically Tailored Meals**

The National Resource Center on Nutrition & Aging

August 8, 2019 Proceedings  
Convened by the National Resource Center on Nutrition and Aging  
Arlington, Virginia  
Written by: Elaine Furlow

The 2019 Proceedings reflect a quick sum within them reflect participants and ar

**(Katie Garfield) Medically Tailored Me...**  
Solution: Nutrition Interventions

Watch later Share

**FOOD IS MEDICINE PYRAMID**

Healthy and Wholesome Ingredients  
Diverse and Nutrient-Dense Ingredients  
Locally and Seasonally Sourced Ingredients  
Food of Color, Flavor, and Variety  
BHA, WIC and Emergency Food Programs

Keynote Speaker  
**KATIE GARFIELD**  
Staff Attorney  
Harvard Law School

Visit: <https://medicalmealsconvening.com>



# UPCOMING TRAINING



## *Nutrition and the Science of Aging*

- **What:** Two Part Webinar Series
- **When:** Tuesday, December 12 & 19, 2019
- **Cost:** Free
- **To Register:** Online

*Brought to you through a partnership with the Academy for Nutrition and Dietetics*



# UPCOMING TRAINING



## *Recipe Development Techniques for Memorable and Marketable Meals*

- **What:** Live + Recorded Webinar Series
- **When - Kick Off Webinar:** Thursday, December 5, 2019
- **Cost:** Free
- **To Register:** Online

*Brought to you through a partnership with the Academy for Nutrition and Dietetics*





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Nutrition & Aging**

Thank You