Spice Blend and Recipe Cards

From the Kitchen to the Clinic: A Cooking Demo on Developing Culturally Appropriate Recipes for Clinical Trials
A Message from the Director of Nutrition Research at the National Pork Board

Improving visibility and inclusion of minority and underrepresented groups in human nutrition clinical trials is a high priority for us at the National Pork Board (NPB). A key consideration to increase the likelihood of translatable health outcomes in these groups is successfully implementing inclusive, culturally appropriate recipes during clinical feeding trials.

NPB hopes to be a resource for you as you develop and test recipes and eating patterns that incorporate personal preferences and cultural traditions, while improving overall diet quality to promote health and well-being across race, ethnicities and life stages.

This booklet contains 2 sample spice blend recipes we created with a clinical research chef that you can use to develop recipes that align with cultural foodways and traditional menus of your target research population. Of course, it’s important to remember that when developing culturally appropriate dietary interventions for human clinical trials, participant characteristics, geographic location, accompanying foods (i.e., side dishes) and feasible portion sizes should be considered.

We hope you’ll keep this booklet handy in your lab and use it as a resource across research teams as you improve the clarity, reproducibility and translation of science from culturally appropriate dietary interventions. We look forward to working with you soon and encourage you to reach out with any questions in the meantime.

Kristen Hicks-Roof, PhD, RDN, LDN

Director of Nutrition Research
National Pork Board
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All-Purpose Meat Seasoning Blend for Clinical Trial Recipes

Ingredients:
2 Tbsp. (22 g) garlic powder
2 Tbsp. (18 g) onion powder
2 tsp. (14 g) salt
2 tsp. (4.6 g) black pepper, (ground)

Directions
Combine all ingredients in a bowl and mix well. Store in an airtight container in a cool, dark place.

Yield
Makes about 6 3/4 Tbsp. (59 g) of all-purpose meat seasoning blend for recipes being used in human clinical trials.

Chef’s Tip
• Use at 1-2 Tbsp. per pound of meat depending on flavor strength desired.
• Add 1 Tbsp. of ground sage (3 g) to seasoning blend for sausage flavor.
• Other spices can be added for personal preference, such as parsley, ground mustard seed, cumin, smoked paprika or others.

Created by: Rachel Gooding, CCS, Consultant Research Chef
Approved for use in clinical human research recipes by: Sibylle Kranz, PhD, RDN, FTOS, Associate Professor at the University of Virginia and Chair of the ASN Nutrition Education and Behavioral Science RIS, Heather Leidy, PhD, Associate Professor at the University of Texas at Austin, and Kristen Hicks-Roof, PhD, RDN, LDN, Director of Nutrition Research at the National Pork Board
**Ingredients:**
- 2 Tbsp. (15 g) chili powder
- 2 Tbsp. (22 g) garlic powder
- 2 Tbsp. (18 g) onion powder
- 1 Tbsp. (5 g) cumin (ground)
- 1 Tbsp. (7 g) smoked paprika
- 2 tsp. (14 g) salt
- 2 tsp. (4.6 g) black pepper (ground)
- 2 tsp. (2.5 g) oregano (dried)
- 1/2 tsp. (1.25 g) cayenne pepper
- 1/2 tsp. (1 g) cinnamon (ground)
- 1/4 tsp. (0.5 g) clove (ground)

**Directions**
Combine all ingredients in a bowl and mix well. Store in an airtight container in a cool, dark place.

**Yield**
Makes about 10 1/2 Tbsp. (90 g) of chorizo meat seasoning blend for recipes being used in human clinical trials.

**Chef’s Tip**
Use at 1-2 Tbsp. per pound of meat depending on flavor strength desired.

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[Choose Your Flavor] Pork Bowl

**Ingredients:**

**Sausage Meat**
1 lb. (454 g) pork loin (center, boneless, diced, frozen for 45 minutes)
2 Tbsp. (30 g) Mexican Chorizo Seasoning Blend (booklet pg. 4)
1 Tbsp. (15 g) white distilled vinegar
1 tsp. (4.5 g) vegetable oil

**Pepper and Onion Blend**
2 cups (104 g) white onions (diced)
2 cups (210 g) green peppers (diced)

**Seasoned Yogurt**
1 cup (245 g) plain Greek yogurt, no fat (strained)
2 tsp. (10 g) lime juice
1 tsp. (6 g) Mexican Chorizo Seasoning Blend (booklet pg. 4)

[Choose Your Flavor] Pork Bowl
(Per Serving, About 1 ½ Cups or 280 g)

1/2 cup (87 g) brown rice (cooked)
1/4 cup (42 g) cooked sausage meat
2 Tbsp. (21 g) black beans (heated through)
2 Tbsp. (30 g) pepper and onion blend
2 Tbsp. (30 g) 75% reduced fat cheddar cheese
1 Tbsp. (10 g) iceberg lettuce (shredded)
1 Tbsp. (10 g) tomato (diced)
2 Tbsp. (30 g) Texas restaurant-style mild salsa
1 1/2 Tbsp. (20 g) seasoned yogurt

**Directions**

**Sausage Meat**
1. In a food processor or bullet blender, pulse chilled meat until ground, resem-bling sausage meat.
2. Transfer to a bowl and combine with chorizo seasoning blend and vinegar until evenly distributed.
3. Heat oil in a skillet over medium-high heat. Add seasoned pork and cook, stirred occasionally until cooked through to 160°F.

**Pepper and Onion Blend**

**Seasoned Yogurt**
In a bowl, combine yogurt, lime juice, and chorizo seasoning blend. Hold refrigerated for service.

**Chef’s Tip**
Black beans can be seasoned with 1 tsp. per cup of chorizo seasoning if desired.

**Service**

In a bowl, plate rice and top with cooked sausage, sautéed pepper and onions, and black beans. Top with cheese, lettuce, tomato, salsa, and seasoned yogurt. Serve warm.

**Yield**


FLIP TO BACK OF RECIPE CARD FOR NUTRITIONAL FACTS.
[Choose Your Flavor] Pork Bowl Nutrition Facts

**Macronutrients**

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<thead>
<tr>
<th>Nutrient</th>
<th>Value</th>
<th>Unit</th>
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<tr>
<td>Kilocalories</td>
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<tr>
<td>Protein</td>
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<td>Carbohydrate</td>
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**Vitamins**

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<td>Vitamin C</td>
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**Minerals**

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<tr>
<td>Chromium</td>
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**Percentage Of Kcals**

- **Protein**: 34.9%
- **Carbohydrate**: 43.4%
- **Total Fat**: 21.7%

**NOTE**: This is a sample recipe for use in human clinical feeding trials. When developing culturally appropriate, dietary interventions for human clinical trials, participant characteristics, geographic location, accompanying foods (i.e., side dishes), and feasible portion sizes should be considered. Naming of the recipe or menu item should also consider your target audience. In this case, because the taste and flavor of recipes need to be adapted to your target research population, [Choose Your Flavor] Pork Bowl, or even [Insert Flavor] or [Insert Culture] Pork Bowl illustrate how adaptable a recipe like this can be for clinical research use.

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When developing culturally appropriate, dietary interventions for human clinical trials, participant characteristics, geographic location, accompanying foods (i.e., side dishes), and feasible portion sizes should be considered as well as common ingredient flavor profile combinations of the target population that pair well with meat, specifically pork.

Here are some flavor profiles from regions around the world you might consider using in culturally appropriate recipes featuring pork as a nutrient-dense source of high-quality, affordable and tasty protein for human clinical research.
A Message from the Director of Nutrition Health and Wellness Initiatives at the National Pork Board

Introducing Pork & Partners, a new community focused on the needs of nutrition professionals. I hope you’ll join the Pork & Partners community and unlock a wealth of resources to help you take your professional development to the next level. Here’s what you’ll get:

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**Featured Recipes**
Empower your patients and clients with our collection of nutritious recipes. These recipes are designed to help them achieve their health goals while enjoying delicious, satisfying and plant-forward meals that pair perfectly with lean pork.

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Emily Krause, MFCS, RD, LD

*Director, Nutrition Health & Wellness Initiatives*
National Pork Board
ekrause@pork.org

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