

Supplementary Table 1. Four-day rotating menu of daily prescribed foods during the randomized controlled trial.

| Day 1 | |
|---|--|
| | Preparation instructions |
| Breakfast: | Mix grits with ¾ cup of water in a bowl. Microwave for 1-1:15 min. Stir in maple syrup and raisins. |
| Grits | |
| Raisins | |
| Syrup | |
| Orange juice | |
| Coffee (not provided) with provided coffee creamer (optional) | |
| Test beverage | |
| Lunch: | Cook Turkey Burger in microwave or oven/toaster until warm. Can also cook turkey burger on pan. Make sure to fully cook. Assemble Turkey Burger on bun with provided tomato, mustard and mayonnaise. |
| Turkey burger on bun with condiments | |
| Chips | |
| Applesauce | |
| Test beverage | Warm stew in microwave or oven/toaster oven until warm. (remove from plastic storage container and place in an oven safe bowl if warming in oven). Toast roll if desired. |
| Dinner: | |
| Beef and potato stew | |
| Roll and margarine | |
| Test beverage | |
| Snacks: | |
| Graham crackers | |
| Fruit bowl x2 | |
| Chips | |

| Day 2 | |
|--|---|
| | Preparation instructions |
| Breakfast: | Toast bagel (optional), microwave egg and assemble bagel sandwich with egg white topped with Daiya Cheese shreds. Warm potatoes in microwave or oven/toaster oven (remove from plastic). |
| Bagel sandwich with egg white and daiya cheese | |
| Roasted potatoes | |
| Apple juice | |
| Coffee (not provided) with provided creamer (optional) | |
| Test beverage | |
| Lunch: | Mix Tuna Pouch, with onion, celery, and mayo found in containers. Assemble prepared tuna salad on bun. |
| Tuna salad on bun | |
| Grapes | |
| Cookies | |
| Test beverage | Heat Pasta for 60seconds (transfer from plastic) (may make popping sound, this is normal). Microwave asparagus in microwave until warm. Chicken Meatballs given frozen. Please cook in microwave for 1min or until hot. |
| Dinner: | |
| Pasta with chicken meatballs and marinara sauce | |
| Asparagus | |
| Test beverage | Soft Pretzel provided frozen, please heat in oven for 3-4min at 400 °F. Alternatively, heat in microwave for 30seconds. |
| Snacks: | |
| Fruit cup x2 | |
| Soft pretzel with honey mustard dipping sauce | |

| Day 3 | |
|--|--|
| | Preparation instructions |
| Breakfast: | Bacon is given fully cooked, ready to eat. Place in microwave for desired temperature. Warm French toast casserole in microwave or oven/toaster oven. Drizzle maple syrup and chopped dried mango over French toast casserole. |
| French toast casserole with dried mango and syrup | |
| Turkey bacon | |
| Cantaloupe | |
| Coffee (not provided) with provided creamer (optional) | |
| Test beverage | |
| Lunch: | Please fully cook lean ground beef in oven or skillet before eating on bun. Warm hamburger in microwave or oven/toaster oven. Assemble on bun and top with, mustard and ketchup. |
| Lean ground beef | |
| Hamburger on bun with condiments | |
| Grapes | |
| Test beverage | Warm pork and gravy in microwave or oven/toaster oven after transferring to oven safe container. Microwave mixed vegetables until warm. Heat pasta for 60 seconds. |
| Dinner: | |
| Pork loin on pasta with gravy | |
| Mixed vegetables with margarine | |
| Test beverage | |
| Snacks: | |
| Rice cake | |
| Fruit cup salsa | |
| Larabar Pita Chips Twizzlers | |

| Day 4 | |
|---|---|
| | Preparation instructions |
| Breakfast: | Warm muffin/bread in microwave or oven/toaster oven on plate. Enjoy with peanut butter and jelly. |
| Banana muffins | |
| Jelly | |
| Peanut butter | |
| Dried mango | |
| Coffee (not provided) with provided creamer (optional) | |
| Test beverage | Chicken not cooked, stir fry vegetables not cooked, rice not cooked. Prepare chicken as desired, warm stir fry vegetables in frying pan or microwave. Put rice in microwave safe bowl and heat for 90 seconds, do not add water. Make sure to fully cook chicken. |
| Lunch: | |
| Chicken and stir-fry vegetables on rice with balsamic sauce | |
| Test beverage | Warm Jambalaya in microwave or in an oven/toaster oven in an oven safe container. Toast bread if desired. |
| Dinner | |
| Shrimp and sausage jambalaya | |
| Test beverage | |
| French bread and margarine | |
| Snack: | |
| Clif z-bar | |
| Carrots | |
| Fruit cup | |

¹Participants were instructed to consume 3 daily test beverages with breakfast, lunch, and dinner.

Supplementary Table 2. Average nutrient composition of 4-day 2200 kcal diet

| | Mean |
|-----------------------|-------|
| Macronutrients | |
| Protein (g) | 97.9 |
| Carbohydrate (g) | 303.8 |
| Dietary Fiber (g) | 17.5 |
| Total fat (g) | 69.7 |
| Saturated fat (g) | 25.2 |
| Minerals | |
| Calcium (mg) | 1301 |
| Iron (mg) | 15.5 |
| Magnesium (mg) | 306 |
| Phosphorus (mg) | 1467 |
| Potassium (mg) | 3428 |
| Sodium (mg) | 2075 |
| Zinc (mg) | 11.4 |
| Vitamins | |
| Vitamin A (µg) | 3375 |
| Vitamin E (mg) | 11.4 |
| Vitamin D (mg) | 12.9 |
| Vitamin C (mg) | 154.2 |
| Thiamin (mg) | 2.6 |
| Riboflavin (mg) | 2.8 |
| Niacin (mg) | 26.4 |
| Vitamin B6 (mg) | 2.4 |
| Vitamin B12 (µg) | 6.4 |
| Choline (mg) | 337.1 |
| Vitamin K (µg) | 93.6 |
| Folate (µg) | 409 |

¹ Values were calculated using NDSR 2022.

Supplementary Table 3. Human primers used for RT-qPCR gene expression.

| Gene | Forward Primer (5'-3') | Reverse Primer (5'-3') |
|----------------|-------------------------------|-------------------------------|
| TLR4 | GCTTCTTGCTGGCTGCATAA | GAAATGGAGGCACCCCTTC |
| TNF α | CTATCTGGGAGGGGTCTTCC | GGTTGAGGGTGTCTGAAGGA |
| MCP-1 | GACCCCAAGCAGAAGTGGGT | GTGTCTGGGGAAAGCTAGGGG |
| IL-6 | GTGGCTGCAGGACATGACAA | TGAGGTGCCCATGCTACATTT |
| p65 | ATCCCATCTTTGACAATCGTGC | CTGGTCCCGTGAAATACACCTC |
| IL-8 | CTTGGCAGCCTTCCTGATTTT | GTGGAAAGGTTTGGAGTATGTC |
| β -actin | AGAAAATCTGGCACCCACACC | GGGGTGTGAAGGTCTCAAA |

Abbreviations: IL, interleukin; MCP-1, monocyte chemoattractant protein-1; TLR4, toll like receptor 4; TNF α , tumor necrosis factor- α ;