

Food as Medicine





Food As Medicine

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Diabetes
Foundation

Green Apple Rx, JCMC Food FARMacy

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Green Apple Rx, JCMC Food FARMacy

Goal: To improve health for all Hudson County Residents by promoting healthy environments and resources

The Food FARMacy opened in April of 2021

Patients are screened at each doctor's appointment for eligibility and must meet the following guidelines:

1. Be an active patient of the Greenville Primary Care
2. Have a qualifying condition in need of nutrition management like diabetes, chronic high blood pressure, high cholesterol, etc.)
3. Self-reporting food insecurity





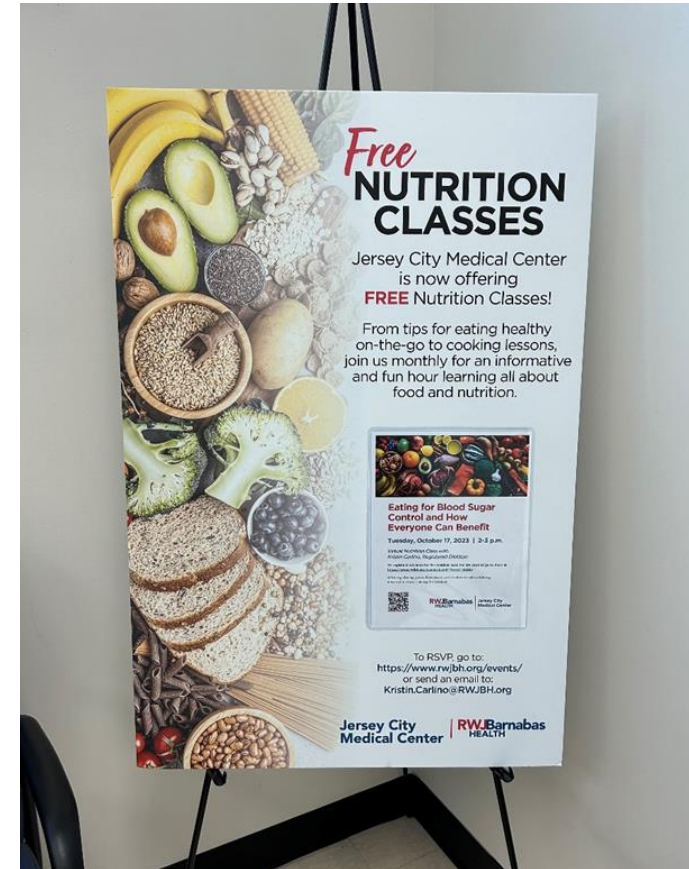
“ Within the past 12 months we worried whether our food would run out before we got money to buy more.”

“ Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.”

Elements of the Program

Once enrolled, patients receive:

- Ongoing, one-on-one nutrition counseling by a Registered Dietitian/Nutritionist
- Fresh, healthful groceries for their entire household once or twice a month depending on need
- Interdisciplinary care
- Referrals to other social programs as needed
- Patients elect to unenroll as they see fit



Additional Community Support



The CFBNJ Resource Access Team helps our clients with their SNAP applications twice a month.

We provide nutrition programming and events for our local community

We offer monthly virtual nutrition classes that are free of cost



Food is Medicine

- Using food-based interventions to help prevent, manage, and treat diet-related diseases.
- These programs reduce the need for health services and can lower healthcare costs.

What do they look like:




- Produce prescriptions
- Medically tailored meal services
- Food Pharmacies



Role of the Dietitian

- Utilize Registered Dietitian/Nutritionists
- Similar programs implemented without RDNs have not had significant impact on biomarkers of health

RESEARCH
Research Paper



A Randomized Intervention of Supplemental Nutrition Assistance Program—Education Did Not Improve Dietary Outcomes Except for Vitamin D Among Lower-Income Women in Indiana

Yue Qin; Rebecca L. Rivera, PhD; Yumin Zhang, MS; Qi Wang, PhD; Janet A. Tooze, PhD; Angela R. Abbott, EdD, RDN, CD; Melissa K. Maulding, MS, RDN; Bruce A. Craig, PhD; Regan L. Bailey, PhD, MPH, RD; Heather A. Eicher-Miller, PhD

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Tables 2 and 3 are available at www.jandonline.org

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<https://doi.org/10.1016/j.jand.2022.06.030>

ABSTRACT
Background The goal of US Department of Agriculture Supplemental Nutrition Assistance Program—Education (SNAP-Education) is to improve the likelihood that those eligible for SNAP will make healthy choices aligned with the *Dietary Guidelines for Americans, 2020-2025*.
Objective The objective of the study was to evaluate the long-term effects of a direct SNAP-Education intervention in which participants actively engage in learning with educator instruction about dietary quality and usual intake of key nutrient and food groups among Indiana SNAP-Education-eligible women participants as an example sample in the context of no similar existing evaluation.
Design The study design was a parallel-arm, randomized controlled, nutrition education intervention, with follow-up at 1 year.
Participants/setting Participants (18 years and older; n = 97 women) eligible for SNAP-Education and interested in receiving nutrition education lessons were recruited from 31 Indiana counties from August 2015 to May 2016 and randomized to an intervention (n = 53) or control (n = 44) group.
Intervention The intervention comprised core lessons of Indiana SNAP-Education delivered between 4 and 10 weeks after baseline assessment. Each participant completed a baseline and 1-year follow-up assessment. Dietary intake was assessed using repeated 24-hour dietary recalls (up to 2).
Main outcome measures Mean usual nutrient, food group intake, diet quality (ie, Healthy Eating Index-2010 scores), and proportion of intervention and control groups meeting *Dietary Guidelines for Americans, 2020-2025* recommendations and Dietary Reference Intake indicators of requirement or adequacy, were determined using the National Cancer Institute method and the simple Healthy Eating Index-2010 scoring algorithm method. Dietary changes between intervention and control groups were examined over time using mixed linear models.
Statistical analyses performed Bonferroni-corrected significance levels were applied to the results of the mixed linear models for comparisons of usual intake of nutrients and foods.
Results No differences in diet quality, intake of food group components, food group intake, or nutrients were observed at 1-year follow-up, except that vitamin D intake was higher among those who received SNAP-Education compared with the control group.
Conclusions A direct SNAP-Education intervention did not improve diet quality, food group intake, or key nutrient intake, except for vitamin D, among Indiana SNAP-Education-eligible women up to 1 year after the nutrition education.
J Acad Nutr Diet. 2023;123(2):284-298.

THE US DEPARTMENT OF AGRICULTURE (USDA) SUPPLEMENTAL Nutrition Assistance Program—Education (SNAP-Education) is a federal nutrition education program designed to improve diet quality, promote a healthy

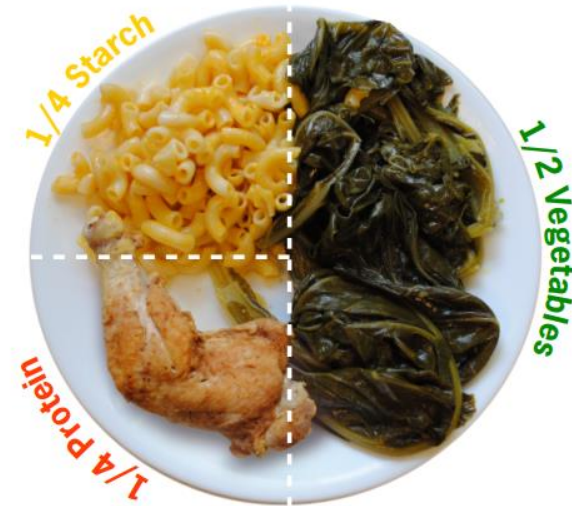
weight, and increase physical activity and other healthy behaviors in accordance with the *Dietary Guidelines for Americans, 2020-2025* (DGA) among lower-income individuals in the United States.¹⁻³ SNAP-Education works toward these goals while

Our Principals



Practical Nutrition

Altering things you are currently doing to make them work better for your health goals rather than completely overhauling your life and starting from scratch



Harm Reduction in Nutrition?

Harm reduction is an evidence-based approach used to engage people who use drugs and equipping them with life-saving tools and information to create positive change and potentially save their lives.

-SAMHSA

Example:

66 y/o male presents after new T2DM dx. Hgba1c of 10.6. Has not seen a doctor or had blood work in 10+ yrs. Non-compliant with diet given by doctor and sent for nutrition counseling



Breakfast

Full for 1 hour



4 donuts

372 Calories

Breakfast

Full for hours



2 donuts + veggies + egg

285 Calories

What We Have Seen

Most recent polling of our patients with diabetes show:

- 77% of patients reporting improved food security
- 81% of patients reporting improved behavior change

Improvements in HGBA1c

- Patients with a starting HGBA1c of 7 or higher see an average decrease of 1.4 in their A1cs at 12 months
- Patients with a starting HGBA1c of 8 or higher (considered uncontrolled diabetes) see an average decrease of 2.3 in their A1cs at 12 months

We attribute the significant decrease in HGBA1c to not only the increase in food access, but the individually tailored nutrition education and the interdisciplinary care they receive as part of our program.



10.) ¿Le ha beneficiado positivamente este programa? Si es así, por favor comparta a continuación:

si yo como mas frutas

9.) "I'm feeling more confident about my food choices" True or false (circle one)?
If False, what would help you reach that goal?

10.) Has this program benefitted you positively? If so, please share below:

It has kept me healthy
and reduced pre-existing
conditions

9.) "I'm feeling more confident about my food choices" True or false (circle one)?
If False, what would help you reach that goal?

10.) Has this program benefitted you positively? If so, please share below:

This program has been positive in my life
It taught me good eating habits and
helpful snacks options.

10.) ¿Le ha beneficiado positivamente este programa? Si es así, por favor comparta a continuación:

Si me ha beneficiado ya que
he aprendido a comer alimentos
mas nutritivos, y comer entre
comidas, frutas case que yo hacia.
Yes, it has benefited me since I have learned
to eat more nutritious foods and eat other fresh foods
which I do want.

10.) Has this program benefitted you positively? If so, please share below:

I am feeling much better health wise.
my blood sugar result is much better
now than before

10.) Has this program benefitted you positively? If so, please share below:

yes it let me know the right food
and what I need less of and more of
fruits vegetables and what drinks I need
more of and less of



FOOD IS MEDICINE

Part 2

PRESENTER

Ginine Cilenti
Executive Director
Diabetes Foundation Inc

Objectives

- Nutrition and Diabetes
- Challenges to Access Care
- Available Programs
- Case Studies



Diabetes By Type



- A1c is between 5.7%-6.4%
- Signs of **insulin resistance** begin developing. The pancreas is still producing insulin, but cells aren't responding



- A1c is $\geq 6.5\%$
- Insulin resistance. Pancreas may still produce insulin.
- Common risk factors include family history, overweight/obese, history of gestational diabetes, inactivity, race/ethnicity.



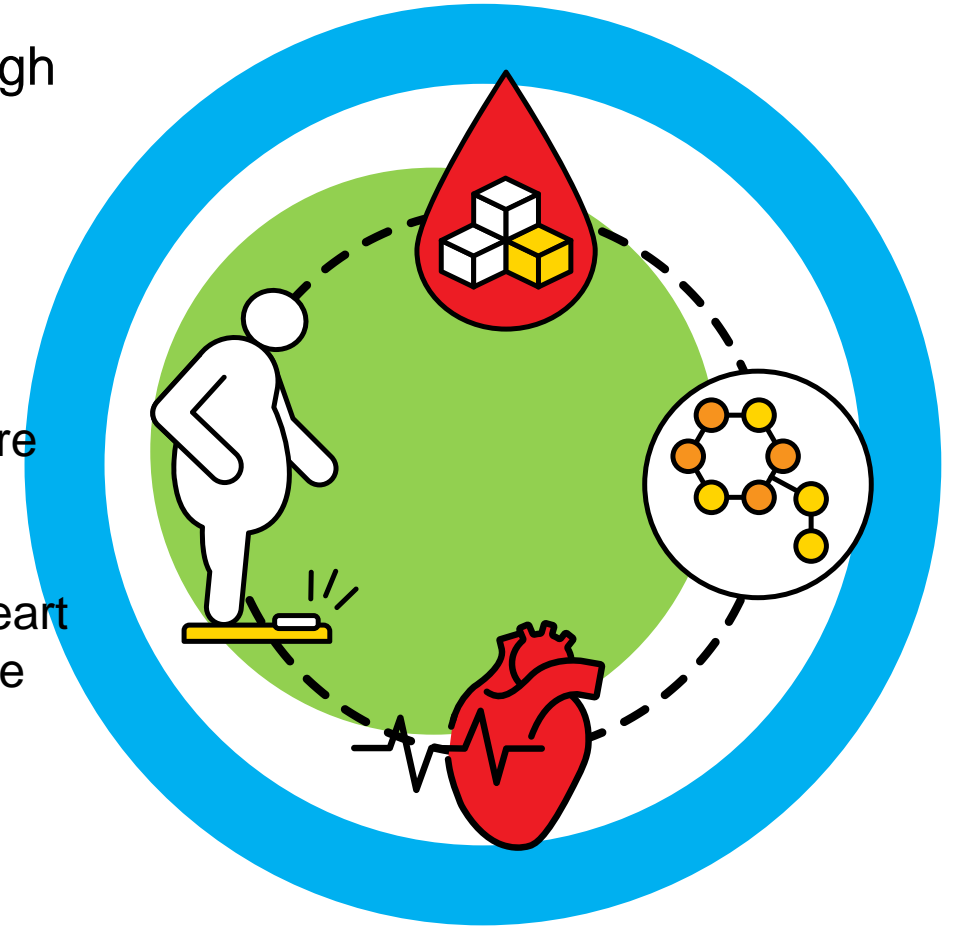
- Autoimmune disease where there is beta cells destruction within the pancreas
- Insulin must be taken to live



- Hormones of pregnancy cause insulin resistance
- Women with GDM are likely to develop t2d within 5-10 years

Type 2 Diabetes: Diet-Related Chronic Condition

- 80% of chronic diseases in the US are preventable through lifestyle changes
- Poor diet is the #1 contributing factor to disability and death
- Overweight or obese, Heart disease & Stroke, Some Cancers are also considered diet related conditions
- Diabetes is 7th leading cause of death in the US, stroke is 3rd, heart disease 1st. When living with diabetes 60% higher risk of a stroke or heart disease.
- Nutrition is crucial because it is the key to maintaining health or preventing disease



DF Mission

Diabetes Foundation's mission is to improve the health and wellness of individuals living with or at-risk of diabetes through equitable, accessible, compassionate, high-quality care.

Challenges to Accessing Care

Food
desert

Income

Transportation

Providers
with Limited
Time or
Background

Population
Solution/
Specificity is
Important

Personal/What
is acceptable
food ?

Low Cost or Free Resources

Income Related: Food Pantry, Knowing How to Shop, WIC (Farmers Market Program/Senior Program) and SNAP-Ed

Food Desert Related: Programs like Table to Table, Client Choice Pantry's, Transportation Programs, Food Pharmacies, funding for transit and tax incentives

Doctor Related: Wakefern free dietitians, Insurance (Medicare/Medicaid/Private), 501c3's i.e. Summit Health and CFBNJ, Diabetes Foundation and CFBNJ

Personal Related: DSMES, DPP, Diabetes Foundation Accredited No-Cost Education

Innovation: Telehealth





Finding Help

- www.feedingamerica.org/find-your-local-foodbank
- www.nj.gov/health/fhs/wic/participants/find-wic/
- www.nj.gov/humanservices/njsnap/apply/ways/
- www.diabetesfoundationinc.org/events/
- <https://dietitians.shoprite.com/>

Local Interventions

- Summit Health and CFBNJ/Various Locations
- Diabetes Foundation and Cumac/Office of Concern Programs
- Diabetes Foundation Train the Trainer Program (under assessment)
- Diabetes Boot Camps in Bergen, Essex and Mercer Counties



SAMPLE EDUCATION

CONTENT

“MEAL PLANNING”

Components of Meals & Snacks

Macronutrients & their roles within the body

Carbohydrates



Proteins



Fats



How do calories impact our health?

What about all the other components of our food?

- Micronutrients (Vitamins/Minerals)
- Fiber
- Water

Nutrition Label at a Glance

1. Serving Information

2. Calories

3. Nutrients

4. Quick Guide to percent Daily Value (%DV)
• 5% or less is **low**
• 20% or more is **high**

Nutrition Facts	
4 servings per container	
Serving size	1 cup (227g)
Amount per serving	
Calories	280
	% Daily Value*
Total Fat 9g	12%
Saturated Fat 4.5g	23%
<i>Trans</i> Fat 0g	
Cholesterol 35mg	12%
Sodium 850mg	37%
Total Carbohydrate 34g	12%
Dietary Fiber 4g	14%
Total Sugars 6g	
Includes 0g Added Sugars	0%
Protein 15g	
Vitamin D 0mcg	0%
Calcium 320mg	25%
Iron 1.6mg	8%
Potassium 510mg	10%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Meal Planning Tips

1. Ask yourself some questions about how meal planning will best work for you and your family.
 - Do you like prepping ahead of time or the day of?
 - If you like prepping ahead, is it best on a certain day of the week?
 - Would you prefer to cook for the week all in one day or maybe cook a few ahead and do some the day of or just prep ahead and cook meals that day?
 - Any specific food restrictions or allergies to foods that you must avoid?
 - Do you have preferred cooking methods– oven, stovetop, air fryer, instapot, crockpot?
 - Is meal planning, prepping and cooking a family process or something you plan to do alone?
 - If you're doing most of the workload, do you know your family's preferences?
 - Which meals do you need the most help with planning and prepping in advance?
 - Do have the time to prep for snacks and meals?



Meal Planning Tips

Planning ahead will always make things more successful
Stock your pantry and fridge with “healthy” staples



Pantry Staples

- Variety of canned tomatoes
- Canned sauces
- Dried Mushrooms
- Raisins
- Dried cranberries
- Dried apricots
- Dried or boxed milk
- Evaporated milk
- Canned/dried lentils
- Canned/dried beans
- Canned tuna
- Canned anchovies
- Canned sardines
- Oatmeal
- Whole grain cereals
- Farro
- Barley
- Rice
- Quinoa
- Pasta



Freezer Staples

- Frozen vegetables
- Frozen fruit
- Shredded cheeses
- Frozen yogurt
- Salmon
- Poultry
- Nuts
- Whole grain corn tortillas
- Freeze bread



Food Journaling: What & Why?

- If you're looking to make a behavior change around food intake, food journaling is a helpful tool.
- It can be helpful in identifying food patterns & areas that require change
- With diabetes, the addition of monitoring your levels before and/or after will give you more support to promote healthy behavior modification. General recommendations are 70-130 mg/dl prior to eating & less than 180 mg/dl within 2 hours post the start of your meal.

Food Journaling tips:

Record throughout the day vs end of day OR use an app to record for ease of use!

Be specific with food type, food portions, beverages & timing of meals.

Food Journal Sample

	Breakfast	Lunch	Dinner	Snacks
S	9 AM/ BG: oatmeal, banana & 1 egg	1 PM/BG:	6 PM/BG:	SKIPPED
M	7 AM/ BG: smoothie (berries, yogurt, kale, flaxseed)	12 PM/BG:	6 PM/BG:	3 PM/BG:
T	7 AM/ BG: Oatmeal, banana, flaxseed, & 1 egg	12 PM/BG:	6 PM/BG:	3 PM/BG:
W	7 AM/BG: 1 egg, 1 slice of ww toast with PB, 1 cup blueberries	12 PM/BG	6 PM/BG:	3 PM/BG:
T	7 AM/ BG: Smoothie (berries, yogurt, kale, flaxseed) & 1 handful almonds	12 PM/BG:	6 PM/BG:	3 PM/BG:
F	7 AM/ BG: 1 egg, ½ bagel with CC, 1 cup of berries	12 PM/BG:	6 PM/BG:	3 PM/BG:
S	9 AM/ BG: 2 eggs, bacon (2 slices), 1 cup of fruit	SKIPPED	5 PM/ BG:	8 PM/BG:



Sample Salad Recipe

Starting food: Lentils

- To add texture & flavor I will add crunchy, salty chick peas or nuts
- To add bitterness I will add mustard greens & kale
- To add sweetness I will throw in some dried cranberries or some left over fresh fruit
- To add a sour punch, I may add some pickled onions or sauerkraut
- Finishing touch: Super simple dressing! See next slide for recipe.

**Because lentils are rich in protein, I don't have to worry about adding one. However, if I have some hardboiled eggs or some leftover chicken or fish around, I may throw that into the mix.

Let's Build a Salad:

1. Start with a food you want to eat
 - It may be a vegetable, a fruit, a piece of meat
 - Listen to what your body wants and use that as your starting point
2. Add texture and variety of flavor to that food.
 - Is your starting food soft, crunchy or chewy?
 - Is your starting food sweet, bitter, salty or sour?
3. Explore colors!
 - What color are you starting with?
 - What colors can you include more of in your salad?
4. Don't forget your protein.
 - Depending on the food you chose as your starter, protein can often get left out of salads. Be sure to remind yourself that there are easy proteins to add. See attached list!
5. Enhance the flavor with the dressing! Try different dressings using the same ratio: 3 parts fat to 1 part acid.
 1. Build your dressing out from there. Add some sweet, spicy, savory flavor to your basic dressing





Simple Vinaigrette

Ingredients:

- 6 Tbsp olive oil
- 2 Tbsp lemon juice (fresh)
- 2 tsp white wine vinegar
- 1 clove garlic
- 2 Tbsp honey or maple syrup
- Pinch of salt & pepper

Whisk all ingredients in large bowl & store remainder of dressing in an airtight container.

*you can add various types of mustard, swap the white wine for red wine, throw in garlic powder as an alternative or enhance with some parsley or other herb

What does YOUR plate look like?

Share your ideas and let's discuss!



SMART Goals



Specific



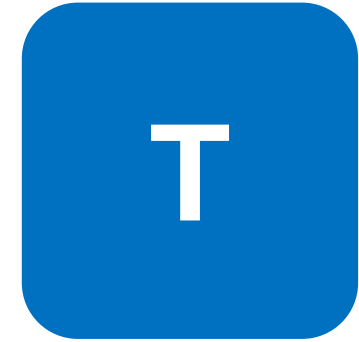
Measurable



Attainable



Realistic



Time Sensitive



Participant Achievements

Education Program Continuous Help* FY 23-24	
Maintain weight or loose weight	7%
Set healthcare appointments/ labs	17%
Understand diabetes	3%
Balancing snacks	7%
Monitoring	7%
Activity	3%
Medication Management	3%
Balancing meals	40%
*Baseline of SMART Goals Completion	30%

Diabetes Foundation Programs



- DF's Guidance program provides personal one-on-one support for you to build a healthcare team or will help schedule a doctor's appointment for you.
- DF's Financial Assistance program offers a 2 month supply of insulin, lancets, test strips, sensors and more open to all **NJ residents**.
- Diabetes Support Groups offered monthly, the first Monday of the month at 12PM and third Thursday at 6PM.
- DF's Diabetes Self-Management Education Support program is available in English and Spanish.

QUESTIONS?

ANSWERS!



THANK YOU!



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