



Jonathan N. Tobin, PhD

President/CEO
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Cardiovascular Disease (CVD)

- CVD is the leading cause of death and is highly prevalent in the older adult population, particularly for low-income and minority communities.
- It is critical to adapt to the growing needs of older adults with CVD and address disparities in health outcomes for those with compounding challenges of food insecurity and poverty.
- We saw an opportunity to implement older adult nutrition and behavioral health programs based on evidence-based diet and self-monitoring plans that have a proven ability to promote cardiovascular health.



DASH Diet Intervention at CBN Older Adult Centers: Goals and Objectives

- Leverage and grow a sustainable, multi-stakeholder partnership
- Adapt existing New York City Department for the Aging (DFTA)-approved/CBN-designed menus
- Optimize client acceptance of the DASH Intervention
- Support cognitive and behavioral change
- Provide positive feedback and enhance self-efficacy
- Enhance the value of nutritional service programs by reducing waste
- Implement a scalable and sustainable monitoring and evaluation system
- Help to inform more broadly the senior center menu locally and nationally



Translational Research Partnership

- The project team is a **Community-Academic Research Partnership** formed in 2015 among Carter Burden Network (CBN), The Rockefeller University Center for Clinical and Translational Science (RU-CCTS), and Clinical Directors Network (CDN)
- A 2016-18 pilot study conducted by the partnership to assess the health of seniors receiving CBN services found a high prevalence of uncontrolled hypertension among older adults
- In 2018 the partners collaborated to submit a successful grant proposal entitled: "Improving Cardiovascular Health through Implementation of a DASH-diet-based Multi-component Intervention with Senior Services Programs Serving Low-income and Minority Seniors"



Clinical Directors Network, Inc. (CDN)

CDN N²: Building a Network of Safety Net PBRNs
AHRQ Center of Excellence for Practice-based Research and Learning

- ▶ A Practice-based Research Network (PBRN) that works with Federally Qualified Health Centers (FQHCs) and other Primary Health Care Safety-net Practices
- ▶ Research Infrastructure to build a Learning Healthcare System
- ▶ A collaboration among:

PBRN Partners:
Access Community Health Network (ACCESS), Chicago, IL
The Alliance of Chicago (ALLIANCE), Chicago, IL
The Fenway Institute (FENWAY), Boston, MA
Center for Community Health Education Research and Service (CCHERS), Boston, MA
Clinical Directors Network, Inc. (CDN, Lead PBRN), New York, NY
New York City Research and Improvement Group (NYCRIG), Bronx, NY
Association of Asian Pacific Community Health Organization (AAPCHO), Oakland, CA
OCHIN, Portland, OR
South Texas Ambulatory Research Network (STARNet), San Antonio, TX
University of Texas Health Science Center at San Antonio (UTHSCSA), San Antonio, TX
ONEFLORIDA: Clinical Research Network, University of Florida at Gainesville, Gainesville, FL

CDNnet Clinical Data Research Networks (CDRNs) Partners:
INSIGHT Clinical Research Network, New York, NY
CAPICOR, Chicago, IL

Health Information Exchanges (HIEs) Partners:
Healthline
BronxHMO

Funded by AHRQ Grant: P30 HS 021667
Principal Investigator: Jonathan N. Tobin, PhD (CDN)



www.CDNnetwork.org



Dozene Guishard, EdD, CDP
 Director
 Director of Health & Wellness Initiatives
 Carter Burden Network (CBN) | New York, NY



Mission

The **Carter Burden Network (CBN)** promotes the wellbeing of seniors 60 and older through a continuum of services, advocacy, arts and culture, health and wellness, and volunteer programs, all oriented to individual, family, and community needs. CBN is dedicated to supporting the efforts of older people to live safely and with dignity. Established in 1971 by New York City Council Member Carter Burden, the organization began as a single employee in the Council office and has since transformed into a network of 11 programs in 7 locations, serving 5,000 people annually



CBN Programs and Services

Four Older Adult Centers

Services



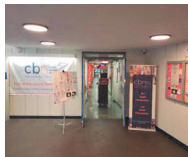
Leonard Covello 312 East 109th Street 10029



Luncheon Club 351 East 74th Street 10021



Lehman Village 1641 Madison Ave, 10029



Roosevelt Island 546 Main Street 10044

Social Services provided 3,000 clients assistance with benefits and entitlements, advocacy, supportive counseling, money management, end-of-life planning and more.

Community Elder Mistreatment & Abuse Prevention (CEMAPP) developed to combat the growing problem of elder abuse throughout Manhattan. The Carter Burden Network assists individuals over 60 years of age who reside in Manhattan as well as Roosevelt Island. The Unit completed over 3,900 contact hours to 346 clients.

Congregate Meals Service

In CY 2023, CBN provided 104,543 meals across the four older adult centers.

Case Assistance

CBN completed 2,861 case assistance contacts in FY 2023.



Healthy Aging Pilot 2016-2018

Carter Burden Network

Blood Pressure in CBN Pilot Population (n=217)

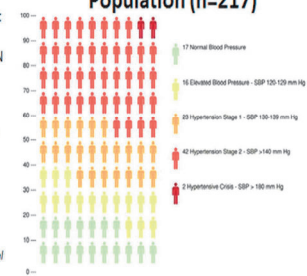
RU/CBN/CDN - Carter Burden Healthy Aging Pilot 2016-2018

Purpose: To collect information on the health of CBN seniors to assess the impact of services on health

Method: Pulse, Blood Pressure, Walk/Balance Test, Surveys on Health, Nutrition, and Social Factors etc.

Highlights:

- Enthusiastic enrollment of 218 seniors
- 99% completed the study
- An important finding about blood pressure.....
- Funded by the Rockefeller University Center for Clinical Translational Science (UL1TR001866)



DASH Nutrition Education & BP Self-Management Classes at: Covello Luncheon Club



Rockefeller University Bionutrition Registered Dietitian and CDN Board Member, Family Medicine Physician & NYU Clinical Director (retired) presenting DASH nutrition, medication adherence and BP self-management education



Rhonda G. Kost, MD
 Clinical Research Officer

Co-Director of Community Engaged Research Core, Director Clinical research Support and Research Facilitation Offices, Associate Professor of Clinical Investigation, The Rockefeller University | New York, NY



The Rockefeller University



- Unique structure
 - 82 heads of labs
 - 100+ year tradition of translational research
 - 40 bed research-only hospital
 - AAHRPP-accredited
- 250 protocols
 - 80% investigator - initiated
 - 20% phase I, II, III or device trials
 - Community based participatory research
- NIH funded CTSA-award funded Center for Clinical Translational Science since 2006
 - Action Committee for Community Engaged Research
 - Community Engaged Research Core
 - Engaging communities and basic scientists early in the design of research
 - Engaging diverse communities
 - Research across the Life Span

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Dietary Approaches to Stop Hypertension (DASH) Diet Intervention Project- Administration for Community Living (ACL)

Primary Aim:

To determine whether implementation of the DASH diet delivered through congregate meal programs by Older Adult Centers (OACs) with health education and behavioral support can lower systolic blood pressure (BP) and improve hypertension control in older adults receiving the program

Primary Outcomes:

- Change in mean systolic BP at 1 month after the full after implementation of the DASH-aligned congregate meals, compared to baseline
- Increase in proportion of individuals whose BP is controlled according to JNC-8 guidelines (for age > 60 years: SBP/DBP < 150/90)



Study design:

Enroll 200 seniors receiving congregate meals at two CBN Older Adult Centers (OACs):

- Luncheon Club - CBN's first Older Adult Center (East 74th Street)
- Leonard Covello Senior Program - NYC Dept. for the Aging innovative Older Adult Center (open 7 days per week) in East Harlem (East 109th Street)

Participants received:

- 1) meals at the centers that are aligned with the evidence-based Dietary Approaches to Stop Hypertension (DASH)-diet model
- 2) health and nutrition education sessions
- 3) on-site blood pressure monitoring
- 4) Training and Support for self-home blood pressure monitoring (HBPM) - each participant received an Omron10 series HBPM device

Assessments (data collection)

- **Time points:** Baseline, Month 1, Month 3, and Month 6:
 - **Biometric:** Blood Pressure, Pulse, Weight and Height
 - **Surveys:** Food Behavior, Food Insecurity, Quality of Life, Social Isolation, Hypertension Medication Adherence and Self-Efficacy
- Self Home Blood Pressure Monitoring (HBPM) occurs throughout the study



DASH1 Diet Implementation Project at CBN Senior Centers Main Effects: Blood Pressure Effectiveness Outcomes

Table 2. Changes in blood pressure, as measured on-site by the health contractor

	Site 1	Site 2	Total
Systolic BP Baseline, mmHg			
Mean ± SD	137.62 ± 20.5	138.15 ± 16.87	137.87 ± 18.8
(Range), n	(96, 191) n = 45	(101, 175) n = 38	(96, 191) n = 84
Systolic BP Month 1, mmHg			
Mean ± SD	135.29 ± 17.08	136.05 ± 16.24	135.64 ± 16.9
(Range), n	(96, 191) n = 41	(100, 156) n = 20	(96, 191) n = 61
Primary Outcome Month 1 - Baseline			
Mean Change ± SD	-2.66 ± 15.56	-8.0 ± 16.9	-4.41 ± 18.76
t = -0.82, p = 0.42	t = -2.12, p = 0.048	t = -1.84, p = 0.07	
n = 41	n = 20	n = 61	
Systolic BP Month 3, mmHg			
Mean ± SD	134.40 ± 14.09		
(Range), n	(175, 165) n = 33		
Month 3 Baseline, mmHg			
Mean Change ± SD	-1.51 ± 17.2		
t = -1.17, p = 0.25			
n = 33			
Controlled BP, Baseline			
n	71.15	64.15	67.95
Controlled BP, Month 1			
n	80.33 (χ ² = 2.67, p = 0.10)	90 (χ ² = 0.33, p = 0.56)	83.65 (χ ² = 2.78, p = 0.10)
Controlled BP, Month 3			
n	82.81 (χ ² = 1.80, p = 0.17)		

Take home message:

1. DASH Diet + Home BP reduced Systolic BP by 4-8 mm Hg

2. DASH Diet + Home BP may have increased BP control by 10-25%

Hashemi et al, *Nutr Metab Cardiovasc Dis* 2022 Aug;32(8):1998-2009
<https://pubmed.ncbi.nlm.nih.gov/35752539>



DASH1 Effectiveness Outcome: Mean Change in Home Systolic Blood Pressure (Both sites)

Time Periods	Mean Change, mmHg	T-value (p-value, n)
Week 1/2 to Week 3	-0.32 ± 5.44	-0.27 (p = .79, n = 48)
Week 1/2 to End of Month 1	-0.86 ± 9.74	-0.58 (p = 0.56, n = 43)
Week 1/2 to End of Month 3	0.43 ± 2.46	0.86 (p = 0.86, n = 34)
Week 1/2 to End of Month 5/6	-6.90 ± 10.70	-3.23 (p = 0.0036, n = 25)

Take home message:

DASH Diet + Home BP reduced Home Systolic BP by 7 mm Hg

Hashemi et al, *Nutr Metab Cardiovasc Dis* 2022 Aug;32(8):1998-2009
<https://pubmed.ncbi.nlm.nih.gov/35752539>





Shirley Dixon

Food Ambassador and DASH Participant
Carter Burden Network (CBN) | New York, NY



Clewert Sylvester, MD

Assistant Director
Health & Wellness Initiatives
Carter Burden Network (CBN) | New York, NY



DASH Participant's Experience with Monitoring her Blood Pressure at Home

- "I measure my blood pressure every day"
- "As a result of this project, I was encouraged by the DASH Project to measure my blood pressure every day"
- "Participants in the study were encouraged to take their BP daily and we reviewed their BP diaries. We asked why they missed a day to reinforce this"
- "By the end of the study we didn't have to do much reinforcement, they were doing this practically every day"



Andrea Ronning, MA, RD

Director of Bionutrition
The Rockefeller University | New York, NY

Dietary Approaches to Stop Hypertension (DASH)



<https://www.nhlbi.nih.gov/education/dash-eating-plan>



Preparation

- GOAL: To Align Carter Burden current menus with DASH guidelines - 6 week cycle
- What do participants want?
 - Cultural food
 - Somewhat concerned about healthful food
 - Food insecurity
- DASH Guidelines
 - Lots of fruits and vegetable (4 servings of each)
 - Whole grain wheat (6 servings)
 - Protein food – lean (6 oz)
 - Dairy – non-fat (2 servings)
 - Dry beans, peas, lentils and nuts (4 servings)
 - Minimal fat and sweets
- Review current menus - goal is to **preserve as much of a familiar menu** as possible
- Retrieve and review recipes - goal is to try to **maintain recipe with minor adjustments**



Engage Carter Burden Participants to Create Buy-in:

- Review DASH guidelines to increase awareness of the intervention
- Taste Test revised recipes – to increase awareness and elicit comments for improvement
- Participant input – react to participant comments/suggestions
- Approve menus with DFTA- gov't agency that provides funds



Implementation

- DASH menu was **gradually introduced** – to obtain buy-in from Older Adults
- Introduce **new menus for entire population** - all meal participants benefit
- Participant **evaluation & feedback**
 - Plate-Waste
 - Likert scale response cards
- Revise menu** based upon evaluation - commercial product
 - Smart Balance
 - Seasoning blend



Salt (Sodium) is Hiding in Plain Sight

Chick Peas (canned) : **1190 mg Sodium** per can (3 ½ servings)
 Chick Peas (dry) : **110 mg Sodium** per bag (11 servings)

Nutrition Facts	
11 servings per container	
Amount per serving	
Calories 160	
% Daily Value*	
Total Fat 2.5g	5%
Sodium 10mg	0%
Total Sugar 5g	10%
Protein 5g	10%

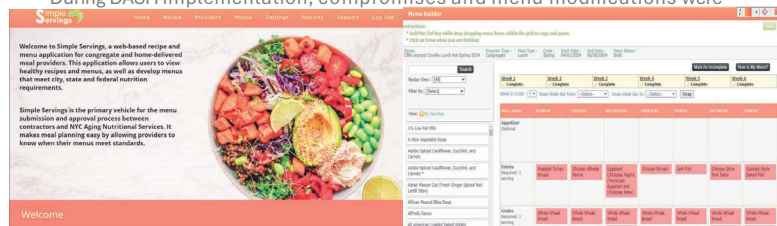


Moufidi Naji

Food Services Manager
 Carter Burden Network (CBN) | New York, NY

DASH Diet & DFTA (Department of the Aging)

- DASH assists with providing a heart-healthy eating style
- DASH provides weekly nutritional goals based on a balanced eating plan
- DFTA has its own dietary protocol of which Older Adult Centers must follow
- During DASH implementation, compromises and menu modifications were



Implementation of DASH Menus

DFTA approval required numerous iterations of menu changes – for example:

- Cooking with Blended Oil → Olive Oil
- Butter Spread → Olive Oil Spread → Smart Balance Whipped Spread**
- Whole Wheat Bread → 100% Whole Grain Wheat Bread
- Vegetables ½ cup per serving → 1 cup per serving**
- Regular pasta → Whole Wheat Pasta
- White Rice → Brown Rice with Beans
- Fruit Juices → Lemon Infused Water
- Adding Sesame Seeds (as garnish on the side)**
- Premade Seasoning → new herb mix**



BEFORE & DURING DASH DIET

Leonard Covello Menu

Menu Items	MONDAY Breakfast		Menu Items	TUESDAY Lunch	
	Before DASH 3/18/19	During DASH 9/21/2020		Before DASH 10/16/2018	During DASH 4/21/2020
Entree 1-2 Serving	Corn Muffins	Fresh Sliced Tomatoes & Cucumbers Hard Boiled Egg	Entree 3oz (cooked) Protein or equivalent	Salmon in Garlic Butter Sauce	Salmon in Garlic Butter Sauce
Grains or Starch 1-2 Servings	Cream of Wheat 1 Cup	Corn Muffins Cream of Wheat ½ Cup	Grains 1-2 servings	Bowtie Pasta Whole Wheat Bread	Veggie Barley Rockland Bakery 100% Whole Grain Wheat Bread
Fruit or Fruit Juice 1-2 Servings	Orange Juice	Cantaloupe	Vegetables 1-2 servings	California Blend Vegetables	California Blend Vegetables
Milk or Yogurt 1 Serving	Milk, low fat 1%	Yogurt non-fat	Fruit or Fruit Juice 1-2 serving	Apple Juice Canned Pineapple	Apple Canned Apricots
Condiments	Almonds Wheat Bran	Almonds (2) Wheat Bran	Milk & Yogurt 1 serving	Milk, low fat 1%	Milk, low fat 1%
			Condiments	Butter	Smart Balance Whipped Spread

Changed menu items



Luncheon Club, Upper East Side



Examples:

- Hungarian Goulash with Beef
- Chicken Alfredo

Leonard Covello, East Harlem



Examples:

- Sancocho
- Grilled Caribbean Chicken Breast



DASH Sustainability & Spread in NYC

From: Dozeme Gulshand
Sent: Friday, April 28, 2023 11:36 AM
To: Rhonda G. Kott; Jonathan N. Tobin, PhD
Cc: Barry Collier; William Dozeme; Moufid Najj; Clewett Sylvester
Subject: DASH 1.0 Update

Hi All,

I would like to share good news that represents all of the hard work of DASH 1.0 Study. Moufid shared that NYC Aging (formerly DFTA) has adopted the DASH Menu under its Simple Serving System. As we know, Simple Serving is the system that congregate meal Food Service Managers use to create menus and where NYC Aging approve menus. Moufid smiled when NYC Aging's head Dietician shared about DASH Diet that has been incorporated into the Simple Serving System.

Here are a few changes that are now in effect across older adult center meal menu selection:

- Less juice and more flavored water
- More vegetables for breakfast
- More fruit per serving

These changes answers the question about DASH implementation and sustainability.

Regards,
Dozeme

Dozeme Gulshand, EdD, CDP
Director, Health and Wellness Initiatives
Carter Burden Network

BUT!

Budget Impact:
Extra vegetable servings = extra cost



Meal Satisfaction

Menu Satisfaction, before and after DASH implementation

Smiley Likert Card:



Anuradha Hashemi, MPH

Community Engagement Specialist
The Rockefeller University Center for Clinical and Translational Science
The Rockefeller University | New York, NY

Overall, how were the meals this week? Mark your choice with a ✓

En general, ¿cómo estuvieron las comidas esta semana? Marque su elección con un ✓

Any other comments about the meals this week?

¿Algún otro comentario sobre las comidas de esta semana?

Strong Frown (1) Weak Frown (2) Neutral (3) Weak Smile (4) Strong Smile (5)

Meal Satisfaction - Pre/Post DASH Implementation

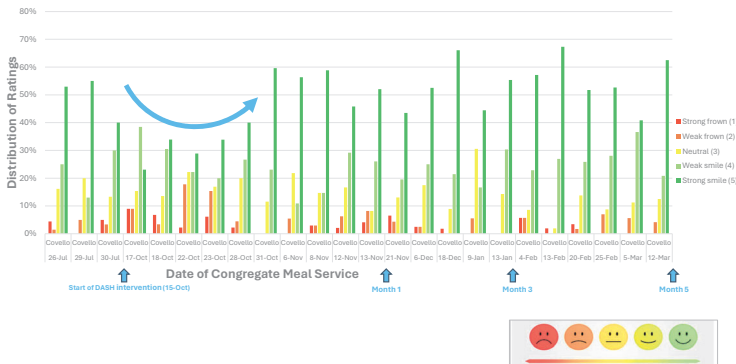












































Plate Waste Assessment Data collection tool.....

Record ID	29					
Percentage is the amount of food remaining on the plate, not the amount consumed.						
Plate Waste Data						
		0%	25%	50%	75%	100%
Protein →	flounder 					
Grain 1 →	brown rice 					
Grain 2 →	whole grain bread 					
Veggie 1 →	Baby carrots 					
Veggie 2 →	steamed spinach 					
Fruit 1 →	apple 					
Fruit 2 →	Mandarin oranges 					

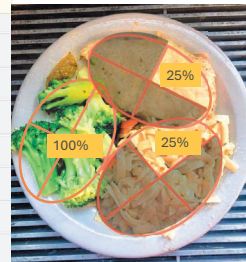
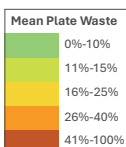


Plate Waste Data

Date	Proteins	Grains	Vegetables	Fruits
10/17/19	Pepper Steak	Linguine	Broccoli	Peach
10/18/19	Flounder	Brown Rice	Baby carrots	Apple
10/22/19	Salmon	Whole wheat bread	California blend vegetables	Apple
10/23/19	Western frittata	Barley and chickpea salad	Sauteed asparagus	Banana pudding
10/23/19	Sancocho	Brown rice	Vegetable mix	Tangerine
10/28/19	Flounder	Brown rice	Italian blend vegetables	Fruit cocktail



Shirley Dixon

Food Ambassador and DASH Participant
Carter Burden Network (CBN) | New York, NY



Clewert Sylvester, MD

Assistant Director
Health & Wellness Initiatives
Carter Burden Network (CBN) | New York, NY



DASH Diet: CBN Client Experience

- Clients were receptive to changed menus because of shared health concerns
- Discussions leading up to menu changes created buy-in
- Adjustment period: fruit juices replaced with fruit-infused water
- Menu changes led to exposure to greater variety of foods (e.g. different types of grains)

"Quinoa was something new to us - I like it but some of the others were unfamiliar with it"

"I like brown rice, and most people like having a healthier choice - I don't see a lot of waste and most people have embraced the brown rice"



Innovations in Nutrition Services Delivery: Implementing Evidence-based Interventions

- The DASH Diet Implementation Project offers Older Adult Centers an opportunity to measure the impact of a DASH diet-aligned congregant meal on health outcomes associated with a chronic health condition
- A community-academic partnership to study older adults aging in place through diet, education and self home blood pressure monitoring



Disrupting food insecurity for seniors living in the community and making an impact on health outcomes!



Jonathan N. Tobin, PhD

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Senior Epidemiologist, Adjunct Professor & Co-Director, Community Engaged Research
The Rockefeller University Center for Clinical and Translational Science | New York, NY



Summary & Conclusions: Project Strengths

Innovative:

- Feasibility of multi-component intervention leveraging existing NYC DFTA-supported congregate meal programs
- First indication of effectiveness of implementing DASH for community-living older adults
- Tailored to tastes and preferences of communities with high CVD risk: low SES and minority older adults
- Working across multiple systems: Non-profit, community-based organizations, academic research institutions, government, philanthropy

Promising outcomes:

- BP reductions (despite COVID interruptions in program delivery and data collection)
- 30% continued home BP monitoring through end of study
- Women and Black participants were more likely to continue home BP monitoring



How Community Health Workers Can Support “Food is Medicine” Interventions

- **Basic Health Education & Nutritional Support Sessions**
 - Nutrition Education
- **Resources**
 - SNAP benefits
 - Food Bucks
 - Supermarket Tours – supermarket savvy
 - Farmers Markets – fresh produce
 - Food Bank/Food Pantry – healthful changes with available foods
 - Hands-on Cooking demonstrations & food tastings
 - Recipes
- **Blood Pressure Measurement**
 - Onsite BP Measures
 - Home Blood Pressure Monitoring (HBPM)
 - Training & Support
- **Physical Activity Promotion**
 - Walking Clubs
 - Health & Fitness Classes (Yoga, Walking)
- **Social Determinants of Health**
 - Counseling
 - Referrals



DASH Celebration of the Chefs!



Project Team celebrating the Chefs and Food Services Staff in implementing DASH menus
We served selection of DASH-aligned treats
We were joined by Kathleen Otte, ACL Region I&II Administrator

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DASH Implementation - Project Collaborators, Contributors & Funders:

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George Davis, CBN/Luncheon Club (older adult)

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- Hearst Foundation (CBN)
- NIH/NCATS Center for Clinical & Translational Science UL1 TR001866 (Rockefeller)
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- Center of Excellence (P30) for Practice-based Research & Learning (CDN)
- This presentation is supported by funding from NYCEAL Grant 10T2HL156812-01 (NYU to CDN)

Food is Medicine DASH Implementation Online Resources



HEALTH TOPICS HEALTH EDUCATION THE SCIENCE GRANTS AND TRAINING

Home / Education and Awareness / DASH Eating Plan

DASH Eating Plan

DASH (Dietary Approaches to Stop Hypertension) is a flexible and balanced eating plan that helps create a heart-healthy eating style for life.

Find DASH-Friendly Recipes

Dissemination Webpage:

www.CDNetwork.org/CBN-DASH



DISCUSSION

QUESTIONS & ANSWERS

LET'S MAKE A MEAL!

How can CHWs adopt & implement some of these evidence-based interventions in your settings?

