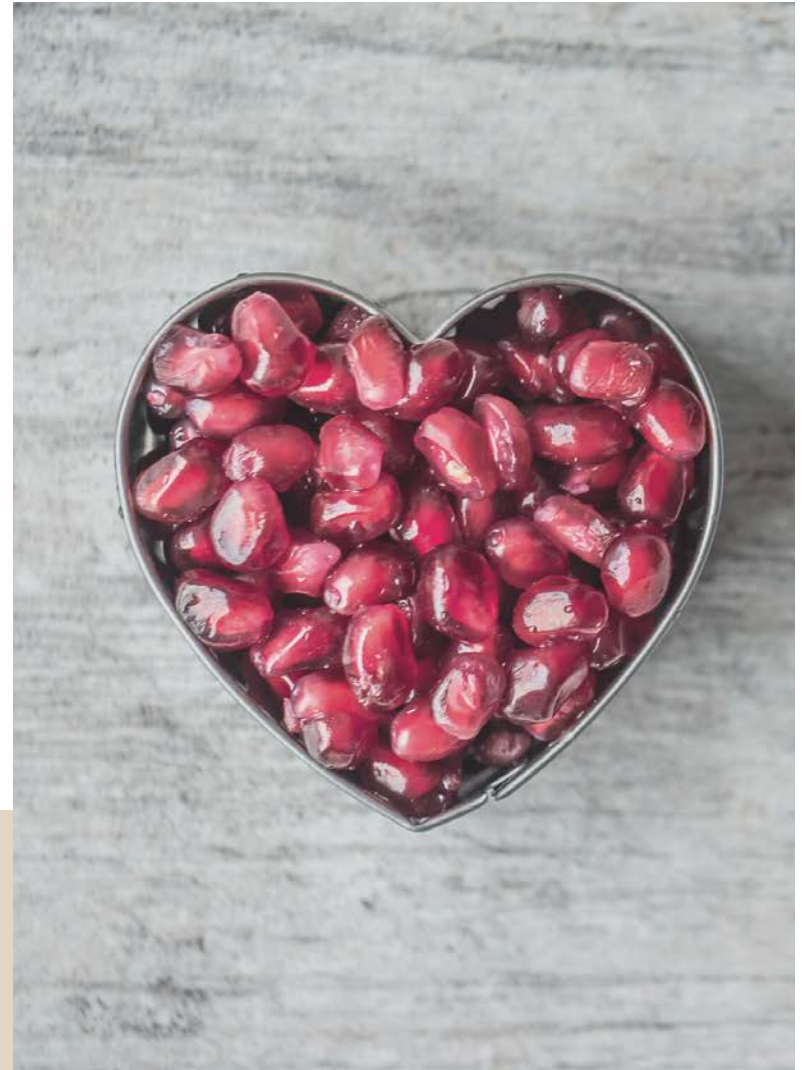


TEXAS A&M AGRILIFE EXTENSION SERVICE

Why Nutrition Matters

Diabetes and Hypertension

Danielle Hammond-Krueger MPH, RD, LD
Extension Program Specialist



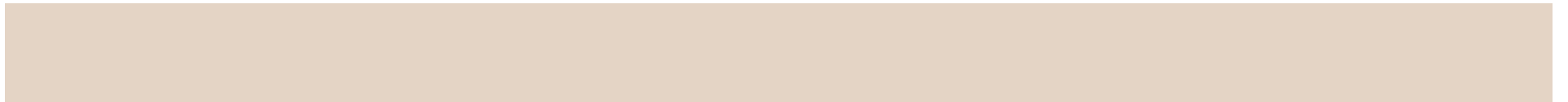
Today's Discussion

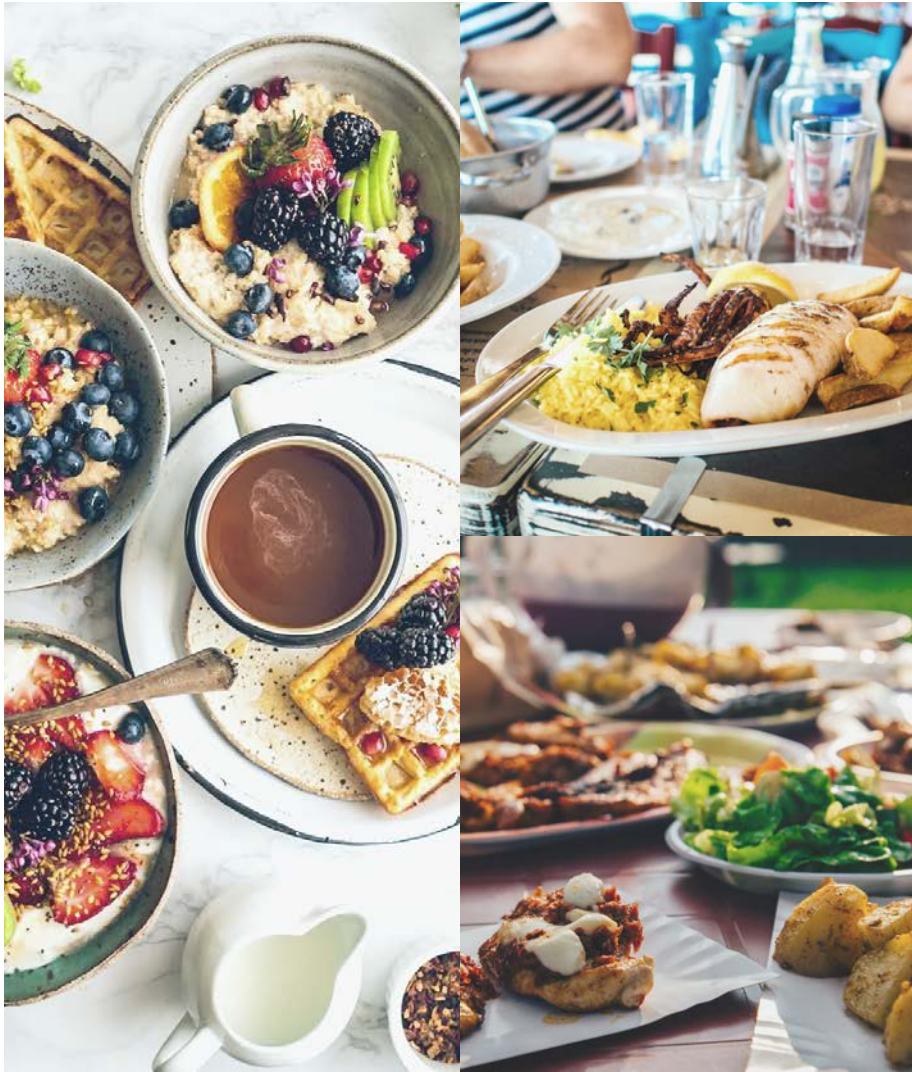
Define type 2 diabetes and hypertension

Understand the connection between food and diabetes/hypertension

Extension Programs addressing these topics

**WHAT COMES TO
MIND WHEN YOU
HEAR THE WORDS:
*TYPE 2 DIABETES?***





WHAT IS TYPE 2 DIABETES?

A disease that occurs when your blood glucose is high. Diabetes is a problem with your body that causes blood glucose (sugar) levels to rise higher than normal.

**BODY MAY NOT USE INSULIN
EFFECTIVELY**



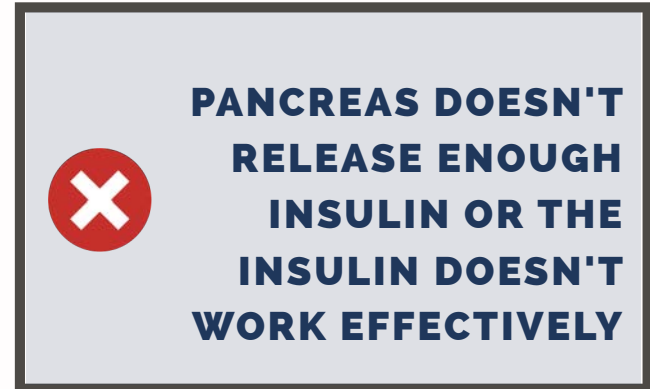
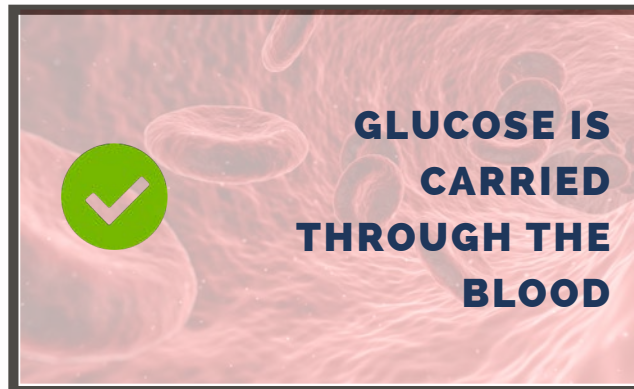
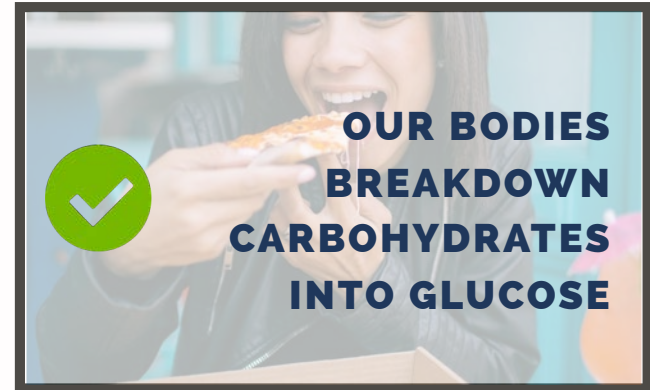
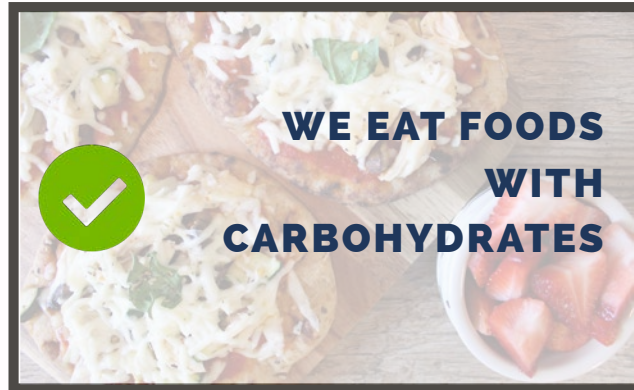
**BODY MAY NOT PRODUCE
INSULIN OR ENOUGH INSULIN**

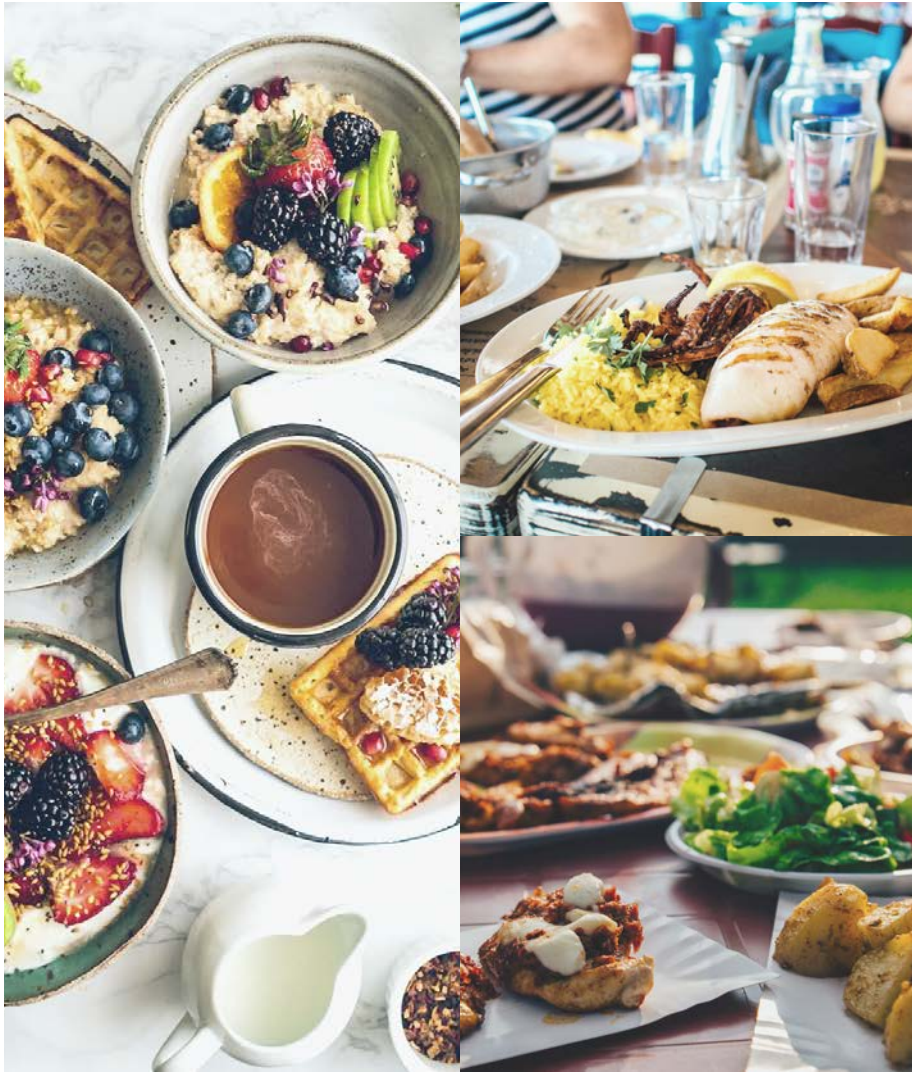


Diagnosing Diabetes

	NORMAL	PREDIABETES	DIABETES
A1C Hemoglobin A1C	LESS THAN 5.7%	BETWEEN 5.7 - 6.4%	GREATER THAN 6.5%
FPG Fasting Plasma Glucose Test	100 MG/DL	100 - 125 MG/DL	126 MG/DL
OGTT Oral Glucose Tolerance Test	140 MG/DL	140 - 199 MG/DL	200 MG/DL

TYPE 2 DIABETES





FOODS THAT AFFECT OUR BLOOD GLUCOSE THE MOST = CARBOHYDRATES

SOURCE: 2019 STANDARDS OF MEDICAL CARE FOR DIABETES

What's in a carbohydrate



Starch



Sugar



Dietary Fiber



Starch



Sugar

**CARBOHYDRATE FOODS
BREAKDOWN INTO
GLUCOSE**

foods with more* carbohydrates

*PER SERVING



GRAINS

Bread, cereal,
rice, pastas,
and tortillas



FRUIT

Fruit juices,
dried, canned
or frozen fruit.



STARCHY VEGETABLES

Potatoes, corn, peas,
beans, lentils, and
winter squashes



DAIRY

Dairy milk,
yogurt, and
smoothies



SWEETS & SWEETENED BEVERAGES

Cakes, jellies,
cookies, ice creams,
or sport drinks

foods lower* in carbohydrates

*PER SERVING



PROTEIN

lean meat, poultry, seafood,
and shellfish



FATS

Olive oil, canola, sunflower,
peanut, or corn oils



NON-STARCHY VEGETABLES

Broccoli, cauliflower,
eggplant, carrots, turnips,
summer squashes

Focus on the amount of carbohydrates

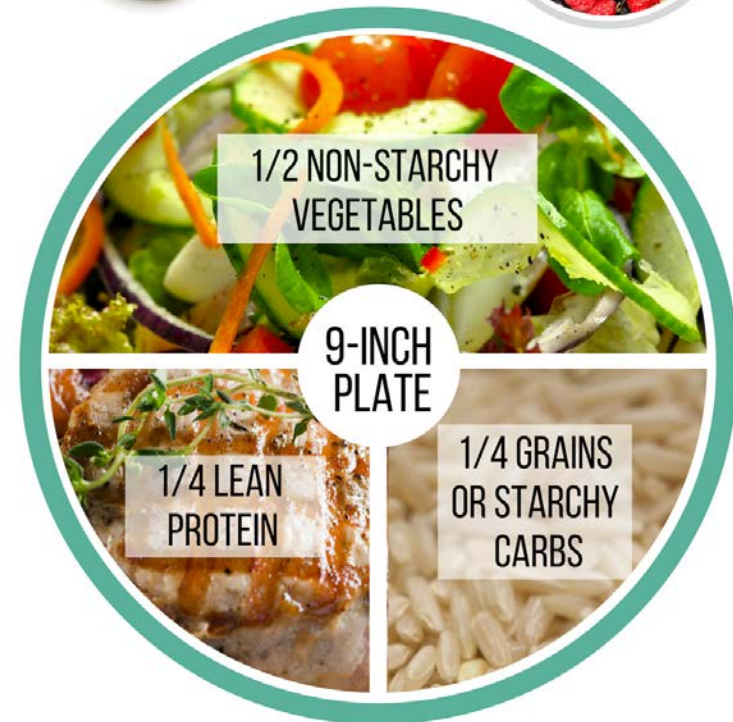


COUNTING CARBOHYDRATES



FOCUSING ON A PLATE METHOD

Diabetes Healthy Plate



EVERYONE'S NEEDS ARE DIFFERENT

NUTRITION'S ROLE



Assist in blood glucose management




Delay or prevent complications from type 2 diabetes



Provides a lifestyle approach

HYPERTENSION

**WHAT ARE A FEW THINGS
ABOUT HEATH THAT
COMES TO MIND WHEN
YOU HEAR:
*HYPERTENSION?***





WHAT IS HYPERTENSION?

A condition in which blood pressure (BP) remains elevated over time. In adults, HTN or HBP is defined as a systolic blood pressure (SBP) of 130mmHg or greater and a diastolic blood pressure (DBP) of 80mmHg or greater.

SOURCE: EVIDENCE ANALYSIS LIBRARY - ACADEMY OF NUTRITION AND DIETETICS ; 2018

CRITERIA FOR HYPERTENSION

NORMAL

<120 mmHG :
Systolic

and

<80 mmHG:
Diastolic

ELEVATED

120-129 mmHG :
Systolic

and

<80 mmHG:
Diastolic

STAGE 1

130-139 mmHG :
Systolic

or

80-89 mmHG:
Diastolic

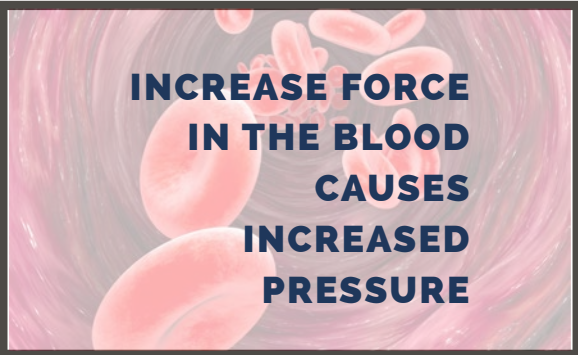
STAGE 2

<140 mmHG :
Systolic

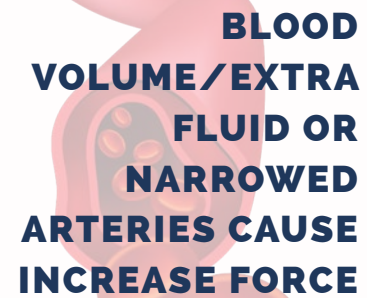
or

≥90 mmHG:
Diastolic

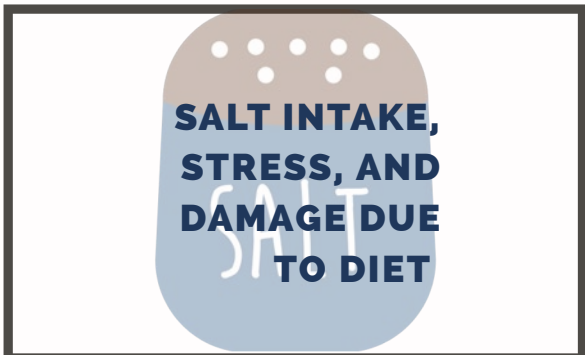
HYPERTENSION



**INCREASE FORCE
IN THE BLOOD
CAUSES
INCREASED
PRESSURE**



**BLOOD
VOLUME/EXTRA
FLUID OR
NARROWED
ARTERIES CAUSE
INCREASE FORCE**



**SALT INTAKE,
STRESS, AND
DAMAGE DUE
TO DIET**

salty six



BREADS
& ROLLS



PIZZA



SANDWICHES



COLD CUTS
& CURED
MEATS



SOUPS

SOURCE: [HTTPS://WWW.HEART.ORG/EN/HEALTHY-LIVING/HEALTHY-EATING/EAT-SMART/SODIUM/SALTY-SIX-INFOGRAPHIC](https://www.heart.org/en/healthy-living/healthy-eating/eat-smart/sodium/salty-six-infographic)

NUTRITION'S ROLE

- Increasing vegetable and fruit intake increases potassium and helps to reduce blood pressure
- Delay or prevent complications from hypertension
- Delay or prevent cardiovascular complications

**WHY IS
NUTRITION
EDUCATION
IMPORTANT**

**25% PEOPLE WITH
DIABETES**

*stated their PCP does not give them
information to help manage their disease*



11% OF TEXANS

HAVE BEEN TOLD THEY HAVE TYPE 2 DIABETES

32% OF TEXANS

HAVE BEEN TOLD THEY HAVE HIGH BLOOD
PRESSURE

**WHAT
ABOUT IN
TEXAS?**

WHY DO NUMBERS MATTER?



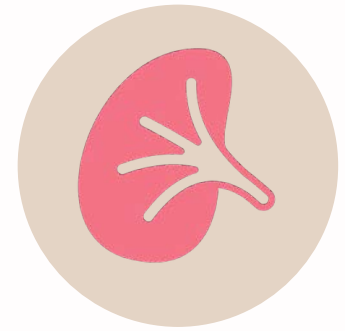
Heart Disease



Stroke



Cognitive
Decline



Other Organs

LOWERING A1C BY 1% REDUCES CHRONIC COMPLICATIONS

37%

DECLINE IN RISK OF
MICROVASCULAR
COMPLICATIONS

14%

DECREASE RATE OF
MYOCARDIAL
INFARCTION

21%

REDUCTION IN
DEATH FROM
DIABETES

2013. Targets for Glycemic Control, Canadian Diabetes Association Clinical Practice Guidelines Expert Committee. Based on findings from Association of glycaemia with macrovascular and microvascular complications of type 2 diabetes (UKPDS 35): prospective observational study.

REDUCING AVERAGE SYSTOLIC BY 12-13 MMHG MAY REDUCE:

37%

STROKE

25%

DEATHS FROM
CARDIOVASCULAR
DISEASE

21%

CORONARY HEART
DISEASE

13%

DEATHS FROM ALL
CAUSES

Source: <https://www.cdc.gov/bloodpressure/facts.htm>

DIABETES CURRICULUM

**Do Well, Be Well
with Diabetes**

**Si Yo Puedo &
Wisdom, Power, &
Control**

**Cooking Well
with Diabetes**

DIABETES CURRICULUM

**Do Well, Be Well
with Diabetes**

**Si Yo Puedo &
Wisdom, Power, &
Control**

DIABETES PROGRAMMING



5 (4 OR 7) CLASS SERIES -
TAUGHT BY LOCAL HEALTH
PROFESSIONALS OR AGENTS
(WEEKLY)



DIVIDED INTO SELF-CARE AND
DIETARY COMPONENTS OF
DIABETES MANAGEMENT



IMPROVE DIETARY AND SELF-
CARE BEHAVIORS AND
CONFIDENCE IN CARING FOR
DIABETES (PREDIABETES,
DIABETES, OR CAREGIVERS)



EVALUATED USING PAIRED PRE
AND POST EVALUATIONS ENTERED
INTO QUALTRICS

DO WELL, BE WELL WITH DIABETES

CLASS 1: GETTING STARTED: HOW FOOD AFFECTS YOUR BLOOD GLUCOSE

CLASS 2: ARE YOU EATING THE RIGHT NUMBER OF CARBOHYDRATES

CLASS 3: BEYOND THE DIET: IMPROVING YOUR BLOOD GLUCOSE CONTROL WITH PHYSICAL ACTIVITY

CLASS 4: BEYOND DIET AND PHYSICAL ACTIVITY: IMPROVING YOUR BLOOD GLUCOSE CONTROL WITH MEDICATION

CLASS 5: CELEBRATING DIABETES CONTROL: HAVING YOUR CAKE (OR SNACK) AND EATING IT, TOO!

SI YO PUEDO/ WISDOM POWER & CONTROL*

CLASS 1: WHAT IS DIABETES?

CLASS 2: HEALTHY EATING AND BLOOD GLUCOSE TESTING.

CLASS 3: MOVE MORE AND TAKING YOUR MEDICINES.

CLASS 4: PREVENTING DIABETES PROBLEMS.

UNDER UPDATES*

WAYS TO HELP



RECRUITMENT OF
HEALTH LOCAL
HEALTH
PROFESSIONALS
OR PARTICIPANTS



ASSIST WITH
CLASS FOOD
DEMONSTRATION
AND CLASS
MATERIALS



ASSIST
WITH DATA
ENTRY OF
SURVEY



PROMOTE ONLINE
CLASS WHEN NOT
ABLE TO TEACH
VIRTUAL OR FACE-TO-
FACE

HYPERTENSION CURRICULUMS

**DASHing Your
Way to Improved
Health**

**Do Well, Be Well
with
Hypertension**

**Cooking Well
with High Blood**

HYPERTENSION CURRICULUMS

**DASHing Your
Way to Improved
Health**

**Do Well, Be Well
with
Hypertension**

DASHING YOUR WAY TO IMPROVED HEALTH



1 SHOT SERIES - IMPLEMENTED AS STAND ALONE OR PRE HYPERTENSION SERIES



PROVIDES A BASIC OVERVIEW TO THE DASH EATING PLAN



IMPROVE KNOWLEDGE OF BLOOD PRESSURE AND VEGETABLE AND FRUIT INTAKE FOR HYPERTENSION



CUSTOMER SERVICE SURVEY

DO WELL, BE WELL WITH HYPERTENSION



4 CLASS SERIES (OPTIONAL 5TH CLASS) - TAUGHT BY AGENTS TRAINED ON HYPERTENSION (BI WEEKLY OR WEEKLY)



DIVIDED INTO DASH EATING PLAN COMPONENTS - VEGETABLES, FRUITS, DAIRY, AND OVERVIEW



IMPROVE BLOOD PRESSURE AND VEGETABLE AND FRUIT INTAKE FOR HYPERTENSION (ELEVATED, HYPERTENSIVE, OR CAREGIVERS)



EVALUATED USING PAIRED PRE AND POST (FOLLOW-UP) EVALUATIONS ENTERED INTO QUALTRICS

DO WELL, BE WELL WITH HYPERTENSION

CLASS 1: MAKING A DATE WITH THE DASH

CLASS 2: BE DASHING WITH FRUITS AND VEGETABLES

CLASS 3: MAKE THE DASH TO SHAKE YOUR SALTY HABIT

CLASS 4: DASHING WITH DAIRY

CLASS 5: OPTIONAL - UNCOVERING ADDED SUGARS

WAYS TO HELP



RECRUITMENT OF
PARTICIPANTS



ASSIST WITH
CLASS FOOD
DEMONSTRATION
AND CLASS
MATERIALS



ASSIST
WITH DATA
ENTRY OF
SURVEY

Thank You!

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