



Translation of the Diabetes Prevention Program

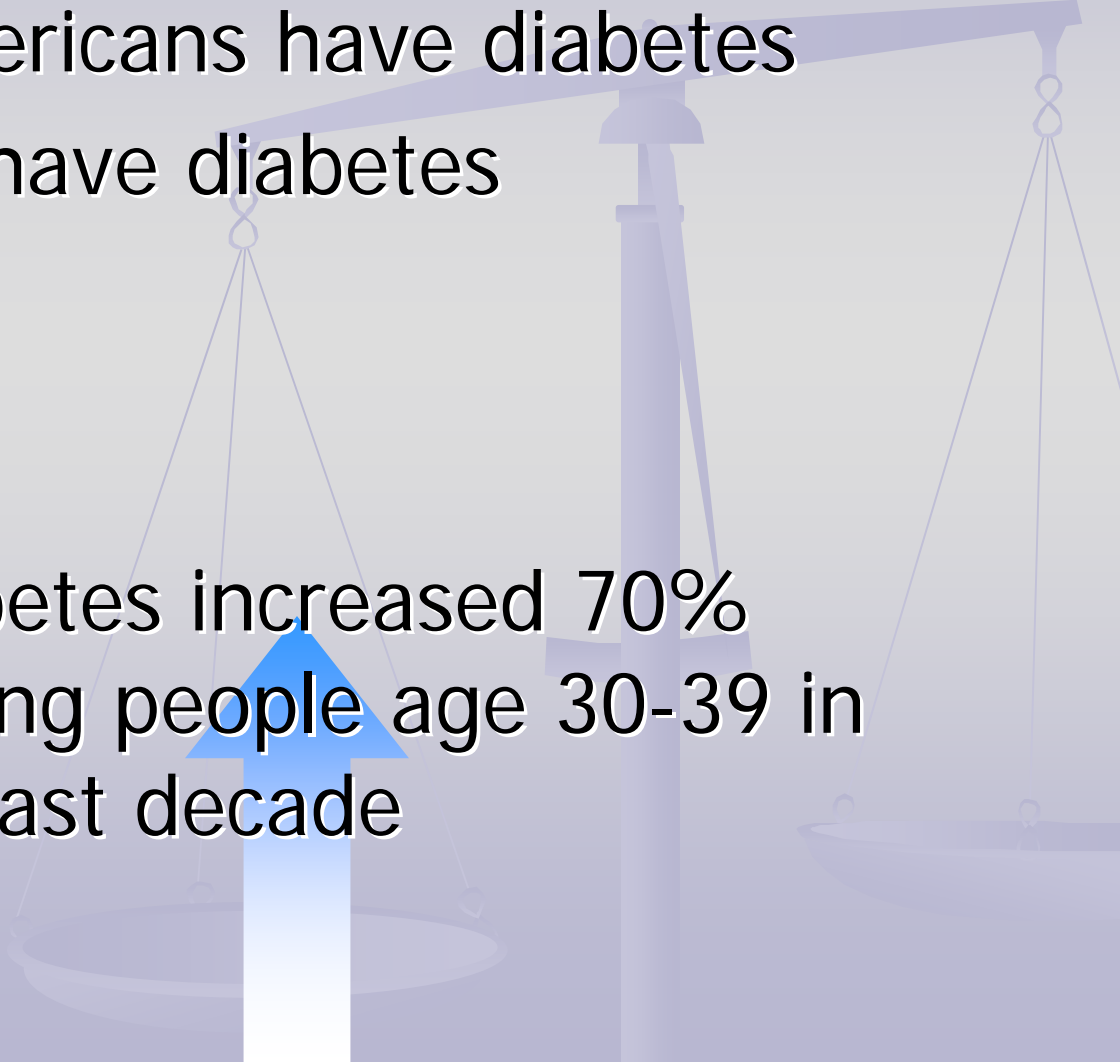
From Medical Research to Public Health

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Diabetes Clinical Trials Unit

Diabetes is the epidemic of our times:

- 18.2 million Americans have diabetes
- 6.3% of adults have diabetes

Diabetes increased 70%
among people age 30-39 in
the last decade



Racial and ethnic populations are especially hard hit by diabetes.



Diabetes Prevalence in High Risk Groups

- 13% of all African Americans have diabetes.
- In Hispanics prevalence ranges from 2.4% to 26.2% based on age and national origin.
- Asian and Pacific Islanders have a prevalence from 1.5% to 4.9% based on national origin and age.
- American Indian and Alaskan Natives range from 4.4% to 21% according to geographic region.
- Pima Indians prevalence is up to 50% of the population.

About 40 million Americans have pre-diabetes

Pre-diabetes is a condition where blood sugar levels are higher than normal, but not high enough for diabetes.

People with pre-diabetes are at an increased risk for developing diabetes.

Who's at risk for pre-diabetes?

- Age – risk increases with age
- Overweight
- High blood pressure
- Abnormal lipid levels
- Family history
- Ethnicity – African American, Hispanic/Latino, American Indian/Alaska Native, or Asian American/Pacific Islander
- History of gestational diabetes
- Inactive lifestyle



The Diabetes Prevention Program

A Randomized Clinical Trial
to Prevent Type 2 Diabetes
in Persons at High Risk

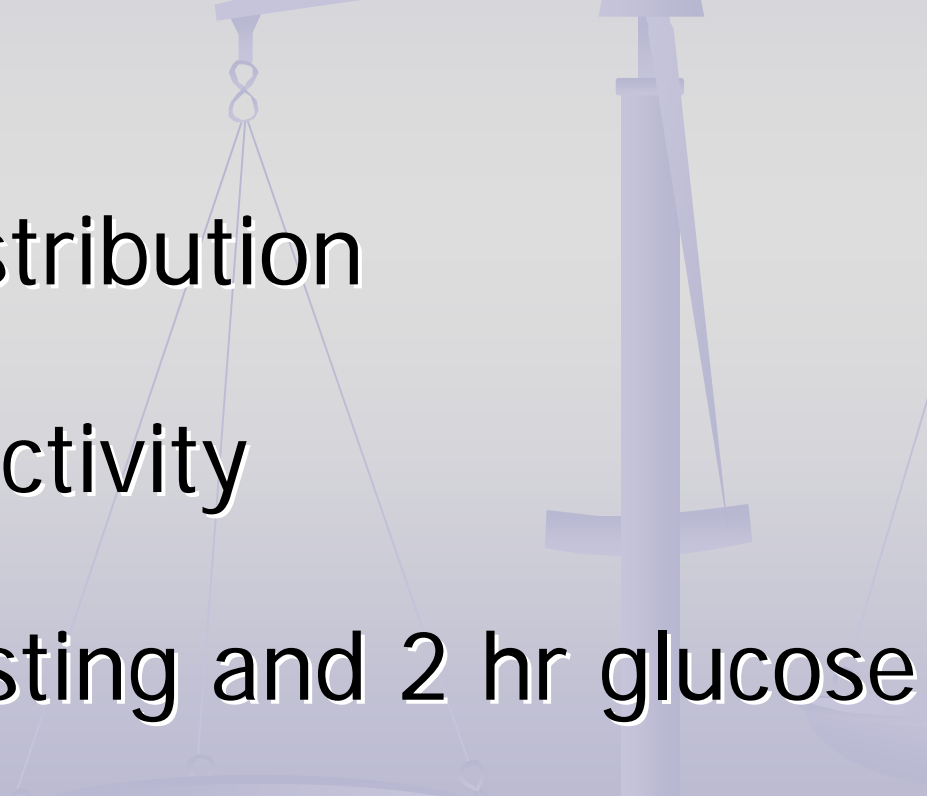


Feasibility of Preventing Type 2 Diabetes

- There is a long period of glucose intolerance that precedes the development of diabetes
- Screening tests can identify persons at high risk
- There are safe, potentially effective interventions that can address modifiable risk factors



Modifiable Risk Factors for Type 2 Diabetes

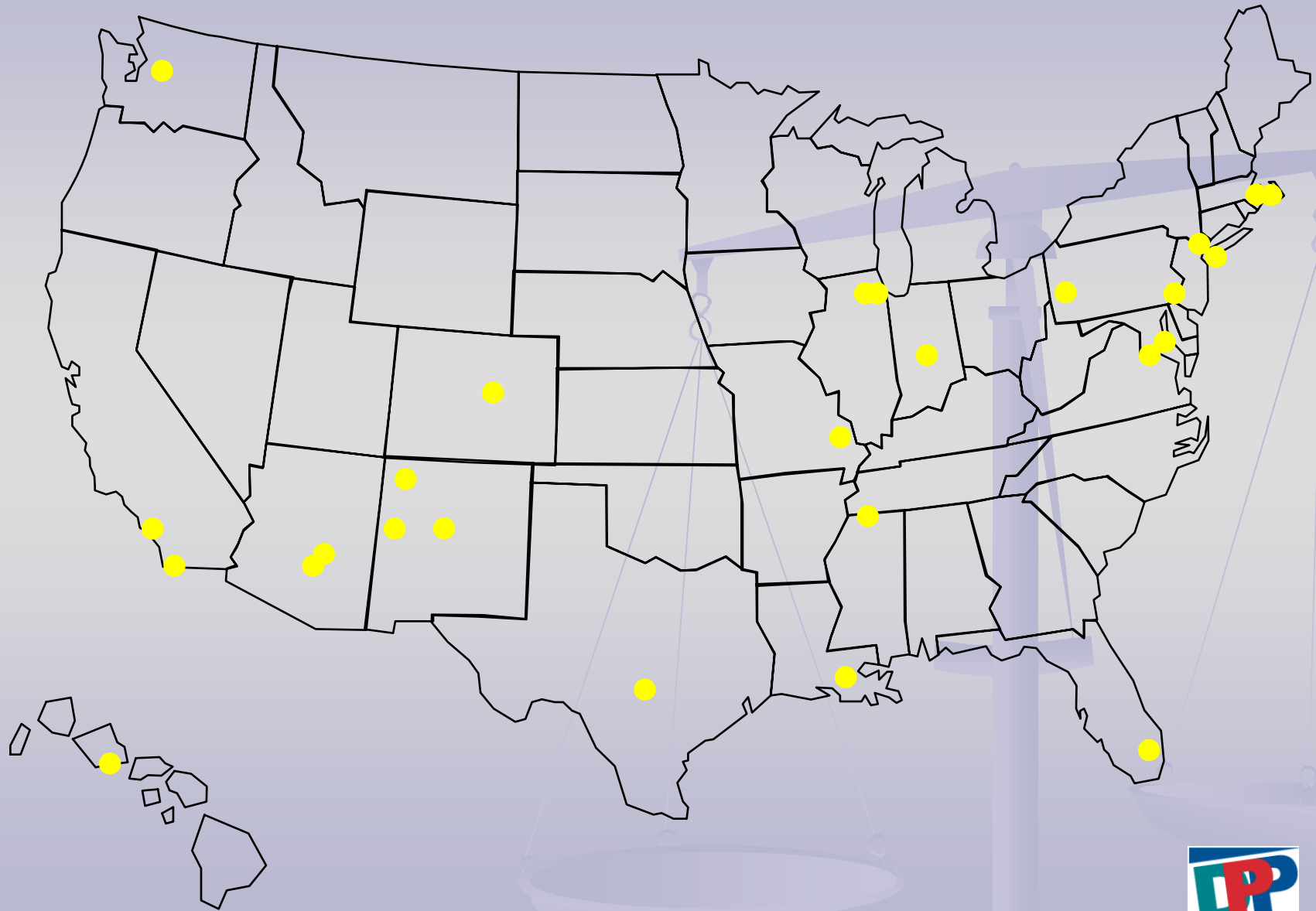
- Obesity
 - Body fat distribution
 - Physical inactivity
 - Elevated fasting and 2 hr glucose levels
- 

Study Design



- 3-group randomized clinical trial
- 27 clinical sites
- Standardized across clinics:
 - Common protocol and procedures manual
 - Staff training
 - Data quality control program

Diabetes Prevention Program Clinics



Eligibility Criteria

- Age \geq 25 years
- Plasma glucose
 - 2 hour glucose 140-199 mg/dl
 - and
 - Fasting glucose 95-125 mg/dl
- Body mass index \geq 24 kg/m²
- All ethnic groups
goal of up to 50% from high risk populations



Study Interventions

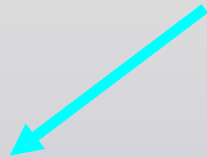
Eligible participants



Randomized



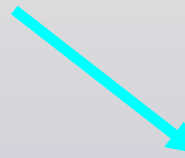
Standard lifestyle recommendations



**Intensive
Lifestyle**
(n = 1079)



Metformin
(n = 1073)



Placebo
(n = 1082)



Lifestyle Intervention

An intensive program with the following specific goals:

- **$\geq 7\%$ loss of body weight and maintenance of weight loss**
 - Dietary fat goal -- **$<25\%$ of calories from fat**
 - Calorie intake goal -- **1200-1800 kcal/day**
- **≥ 150 minutes per week of physical activity**



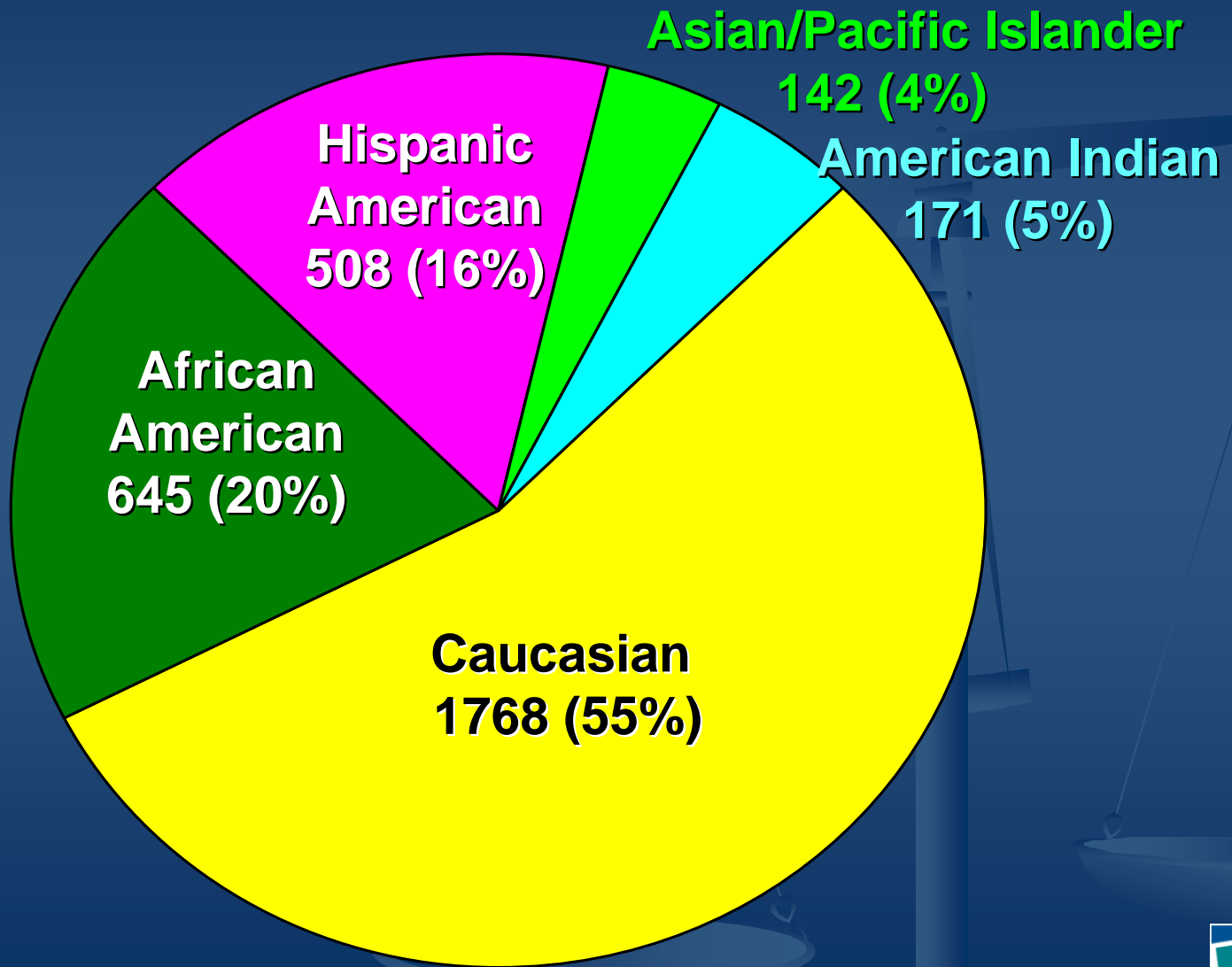
Interventions: Medications

Metformin- 850 mg twice per day

**Placebo- Adjusted in parallel with
active drugs**



DPP Population

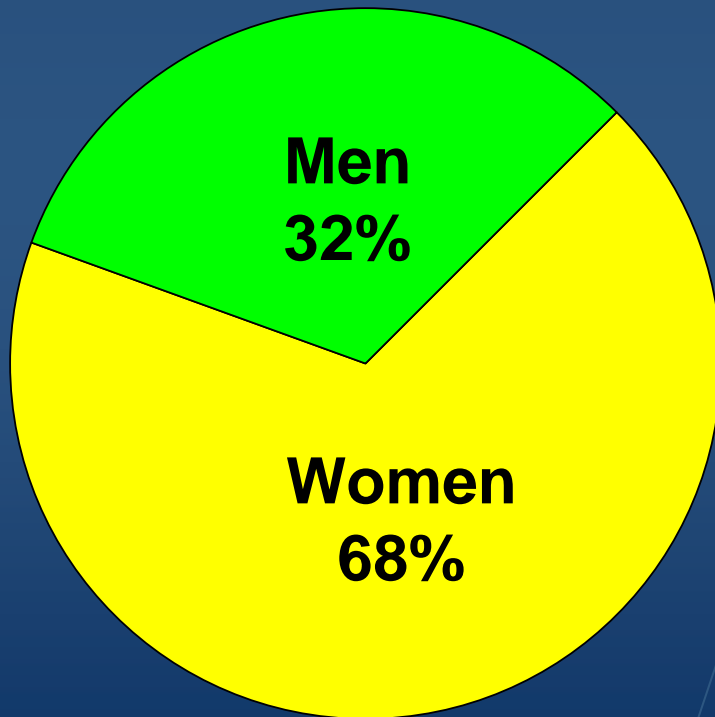


The DPP Research Group, *Diabetes Care* 23:1619-29, 2000

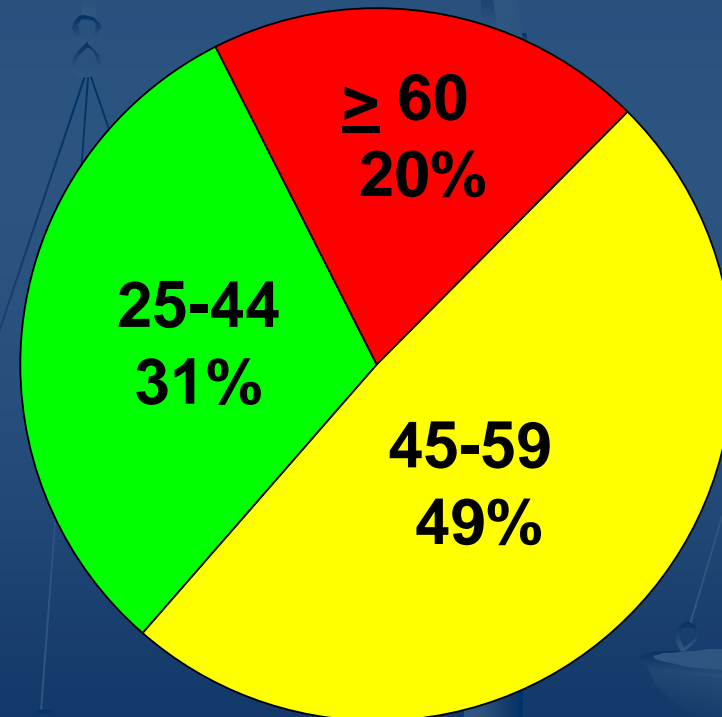


DPP Population

Sex
Distribution



Age
Distribution



Demographic and Socioeconomic Characteristics by Sex (2)

	<u>Overall</u>	<u>Male</u>	<u>Female</u>
<i>n</i>	3,234	1,043	2,191
Employment Status *			
Employed	2401 (74.2%)	771 (73.9%)	1630 (74.4%)
Retired	420 (13.0%)	217 (20.8%)	203 (9.3%)
Homemaker	204 (6.3%)	1 (0.1%)	203 (9.3%)
Not employed	121 (3.7%)	33 (3.2%)	88 (4.0%)
Seasonally employed	25 (0.8%)	8 (0.8%)	17 (0.8%)
Student	21 (0.6%)	2 (0.2%)	19 (0.9%)
Other	37 (1.1%)	11 (1.1%)	26 (1.2%)
Never worked	5 (0.2%)	0 (0.0%)	5 (0.2%)

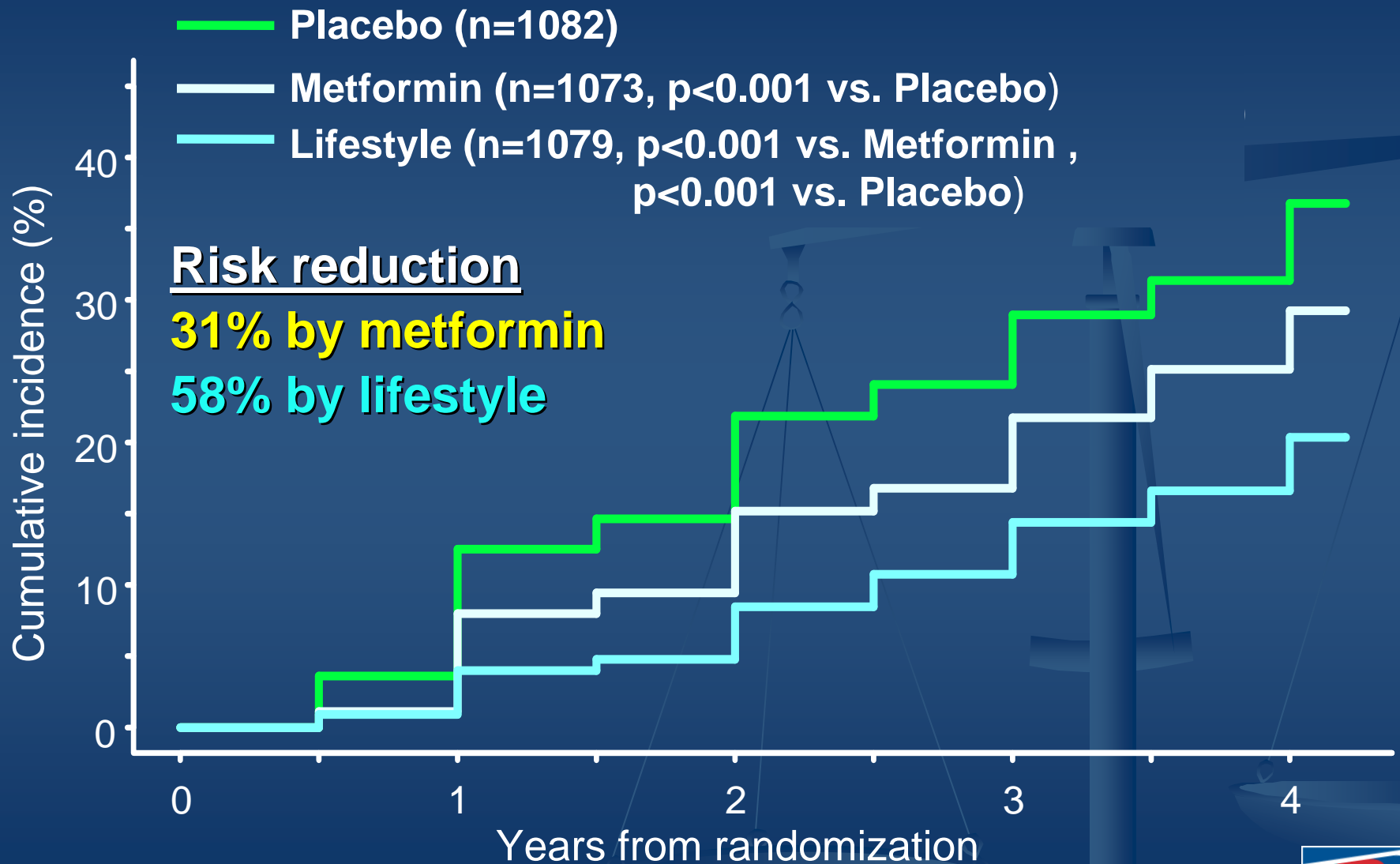
Demographic and Socioeconomic Characteristics by Sex (3)

	<u>Overall</u>	<u>Male</u>	<u>Female</u>
<i>n</i>	3,234	1,043	2,191
Education in years *			
<13	834 (26%)	221 (21%)	613 (28%)
13 to 16	1556 (48%)	488 (47%)	1068 (49%)
17 or more	844 (26%)	334 (32%)	510 (23%)
Annual family income			
< \$20,000	446 (14%)	110 (11%)	336 (15%)
\$20,000 to <\$35,000	561 (17%)	146 (14%)	415 (19%)
\$35,000 to <\$50,000	641 (20%)	207 (20%)	434 (20%)
\$50,000 to <\$75,000	646 (20%)	218 (21%)	428 (20%)
> \$75,000	682 (21%)	281 (27%)	401 (18%)
Refused	257 (8%)	81 (8%)	176 (8%)

Retention and Participation

- 99.6% of the study cohort alive at study end
- 93% completed study
- 93% of annual visits completed
- Average follow-up 2.8 years (range 1.8 - 4.6)

Incidence of Diabetes



The DPP Research Group, *NEJM* 346:393-403, 2002



Consistency of Treatment Effects

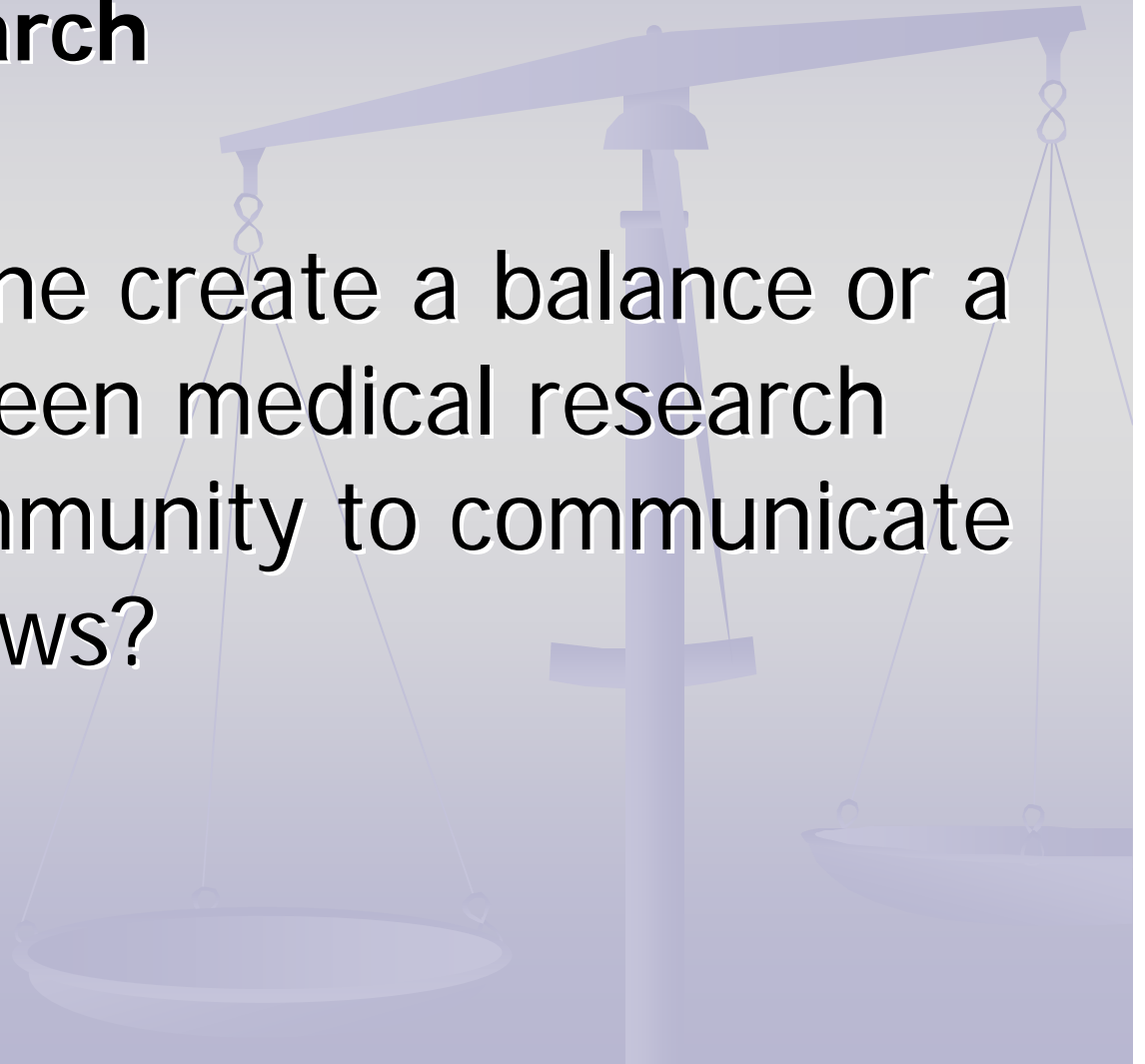
- **Lifestyle intervention was beneficial regardless of ethnicity, age, BMI, or sex**
- **The efficacy of lifestyle relative to metformin was greater in older persons and in those with lower BMI**
- **The efficacy of metformin relative to placebo was greater in those with higher baseline fasting glucose and BMI**



Translation of the DPP

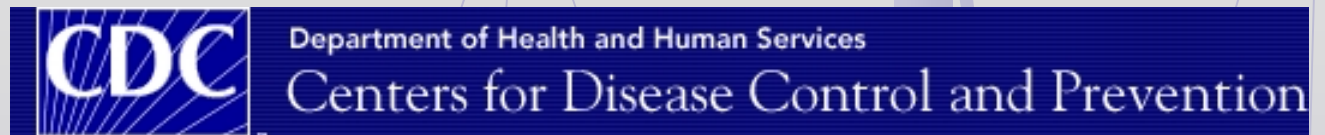
- **Medical Research**

- How does one create a balance or a bridge between medical research and the community to communicate the good news?



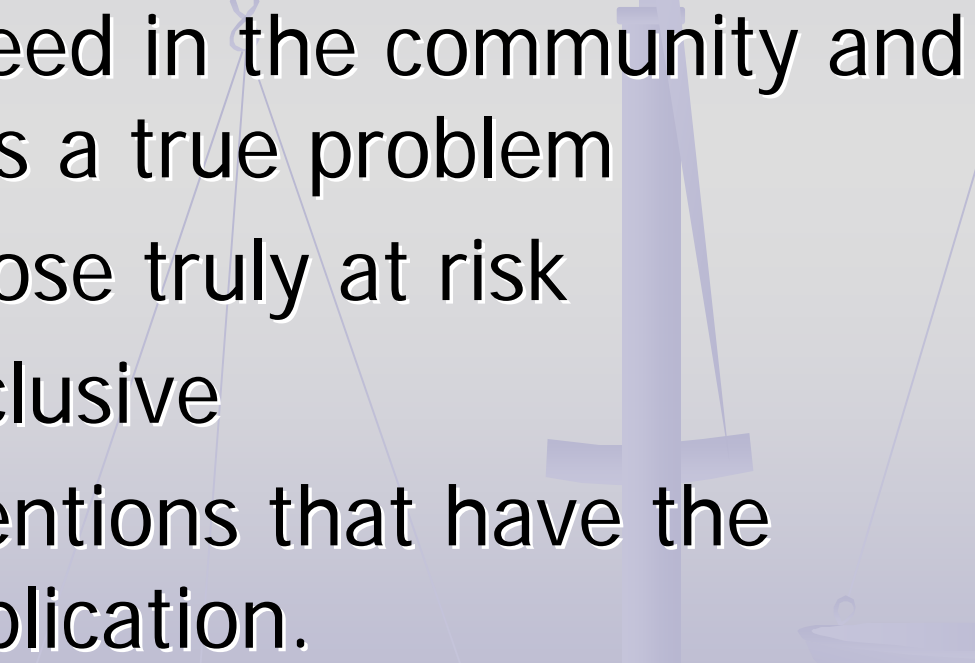


U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health



What does it take to have a successful translation of medical research?

It takes clinical research that:

- Recognizes a need in the community and sets out address a true problem
 - Accounts for those truly at risk
 - Is purposely inclusive
 - Chooses interventions that have the potential for replication.
- 

Diabetes Prevention Program (DPP) Findings

Lose 5 to 7 percent of body weight by:

- Getting 30 minutes of physical activity, 5 days a week
- Following a low-fat, low-calorie eating plan





small steps

big rewards

Prevent type 2 Diabetes

Get Real! You don't have to knock yourself out to prevent diabetes.



GET REAL!

YOU DON'T HAVE TO KNOCK YOURSELF OUT TO PREVENT DIABETES.

Studies show that people at high risk for diabetes can prevent the disease by losing a small amount of weight by getting 30 minutes of physical activity, 5 days a week, and eating healthier. The key is: Small steps that lead to big rewards. Use these tips for ideas on moving more and eating healthier.

Take your first steps today!

step 1 Move More. Getting more physical activity every day will help you burn more calories and lose weight. Try to get at least 30 minutes of physical activity, 5 days per week. If you have not been active, start off slowly, building up to your goal.

Here are some ideas to fit more physical activity into your day.

- ✓ When shopping, park a little farther away from the store's entrance. If it's safe, get off the bus a stop or two early and walk the rest of the way.

- ✓ When watching TV, use the commercial break to take a quick walk around your home or do some exercises such as sit-ups, leg lifts, marching in place, etc.
- ✓ Try to schedule walking "dates" with friends or family members throughout the week.
- ✓ Try to get a "workout" during the day. Take a walk during half of your lunch break. Deliver a message in person to a coworker instead of e-mailing it. Take the stairs to your office instead of the elevator.



GET REAL!

YOU DON'T HAVE TO KNOCK YOURSELF OUT TO PREVENT DIABETES.

If you are over 45 and overweight, you may be at high risk for type 2 diabetes. Losing a small amount of weight by getting 30 minutes of physical activity 5 days a week and eating healthy, will help you prevent diabetes.

For more information about diabetes prevention, call 1-800-438-5383 and ask for "Your GAME PLAN for Preventing Type 2 Diabetes."



small steps
big rewards
Prevent type 2 Diabetes

A message from the National Diabetes Education Program, sponsored by the National Institutes of Health and the Centers for Disease Control and Prevention.



step 2 Eat Healthier. When it comes to eating healthier to lose weight, it all comes down to choices. Choosing foods that are lower in fat and calories and limiting portion sizes can help you to lose the weight you need to prevent diabetes.

Here are some things you can start doing today to eat healthier:

- ✓ Choose foods that are lower in fat. Instead of fried chicken, try it grilled or baked. Instead of french fries or potato chips, slice potatoes, sprinkle them with a little oil, salt, and pepper, and bake them in the oven.
- ✓ Buy more fruits, vegetables, and whole-grain foods every time you shop. Try a new fruit or vegetable each week.
- ✓ Lighten your recipes by using low-fat or light versions of ingredients such as sour cream, cream cheese, or mayonnaise. Use appliance instead of margarine or oil when baking.
- ✓ Make sure you always have a healthy snack with you in case you get hungry, like an apple, a banana, or a yogurt.
- ✓ Serving sizes are often smaller than we think. Use this chart as a guide for portion sizes:

Serving sizes are often smaller than we think. Use this chart as a guide for portion sizes.

1/2 cup of rice or pasta =
An ice cream scoop

1 1/2 ounces of cheese =
Four dice

3 ounces of meat or fish =
Deck of cards or cassette tape

2 tablespoons peanut butter =
A ping pong ball



step 3 Start Your GAME PLAN for Preventing Diabetes. The key

to losing weight and preventing diabetes is to make long-term changes that work for you - not quick fixes. These tips are a great way to get you started on your way to preventing diabetes but are only the first steps.

To help you lose weight to prevent diabetes, the National Diabetes Education Program (NDEP) has created "Your GAME PLAN for Preventing Type 2 Diabetes." Order your free copy of the GAME PLAN to learn how to set goals, track your progress, and get more tips to help you reach your goals.

To get your free GAME PLAN, visit www.ndep.nih.gov or call 1-800-438-5383.




A message from the National Diabetes Education Program, sponsored by the National Institutes of Health and the Centers for Disease Control and Prevention.

NDEP Publication No.


small steps
big rewards
Prevent type 2 Diabetes

More than 50 Ways to Prevent Diabetes



Reduce portion sizes.

- #1 **Less on your plate, Nate.**
- #2 Keep meat, poultry, and fish servings down to 3 ounces (about the size of a deck of cards).
- #3 Drink at least one glass of water before each meal.
- #4 Try not to snack while cooking or cleaning the kitchen.
- #5 Try to eat three sensible meals at regular times throughout the day.
- #6 Make sure you **eat breakfast** every day.
- #7 Eat your biggest meal in the middle of the day.
- #8 **Share** your desserts.
- #9 When eating out, have a big salad, then split an entrée with a friend or have the other half wrapped to go.
- #10 Stir fry, broil or bake with non-stick spray or broth and try to cook with less oil and butter.



- #11 Order your favorite sandwich but skip the french fries at restaurants.
- #12 Try your fast-food sandwich by removing the bread. **Select** the healthiest at fast-food restaurants: chicken instead of the beef.
- #13 Listen to music while you are watching TV (people are more active while watching TV).
- #14 It takes 20 minutes for your stomach to send a signal to you that you're full. Eat slowly.
- #15 **Eat a small meal, Lucille.**
- #16 Quench your thirst with water before soda or other sweet beverages.
- #17 You don't have to cut out your favorite foods. Just cut your portion size and eat slowly.

Relax your mind, and soul.

You can exhale, Gall.


Don't try to change your entire way of eating and exercising all at once. Try one new activity or food a week.

Find mellow ways to **relax**—try deep breathing, take an easy paced walk, or enjoy your favorite easy listening music.

Give yourself daily "sanctuary time" and honor this time like any other appointment you make... whether it's spending time reading a book, taking a long bath, or meditating.


Try not to eat out of boredom or frustration. If you're not hungry, do something else.

Honor your health as your most precious gift.

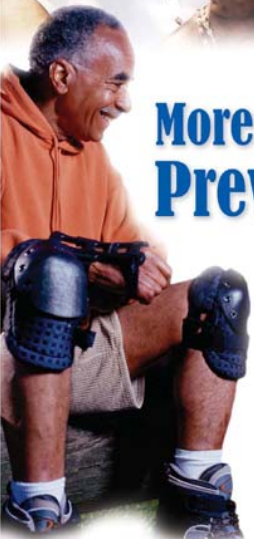


Add more physical activity to your daily routine.

- #18 **Dance it away, Faye.**
- #19 Show your kids the dances you used to do when you were their age.
- #20 Turn up the music and **jam** while doing household chores.



- #21 Deliver a message in person to a co-worker instead of e-mailing.
- #22 Take the stairs to your office. Or take the stairs as far as comfortable, and then take the elevator.
- #23 Make a few less phone calls up with friends during a scheduled **walk**.
- #24 March in place while you are watching TV.
- #25 Park as far away as possible from your favorite store at the mall.
- #26 Select an exercise video from the library.
- #27 Get off the bus one stop early and walk the rest of the way home at least two days a week.




More Than 50 Ways to Prevent Diabetes

#1 Less on your plate, Nate
#18 Dance it away, Faye
#28 Snack on a Veggie, Reggie

African Americans who are overweight are at high risk of developing type 2 diabetes. Losing a small amount of weight, by getting 30 minutes of physical activity 5 days a week and eating healthy, will help prevent diabetes.

For more information about diabetes prevention, call 1-800-438-5383 and ask for "More Than 50 Ways to Prevent Diabetes"



small steps
big rewards
Prevent type 2 Diabetes

www.ndep.nih.gov

A message from the National Diabetes Education Program, sponsored by the National Institutes of Health and the Centers for Disease Control and Prevention.

Be proactive.

Take up your own, Yvonne or Simone.

There are many more ways to prevent type 2 diabetes with healthy eating and physical activity. Discover your own and share it with your family, friends and neighbors.



Prevenimos la diabetes tipo 2. Paso a Paso.

PREVENT TYPE 2 DIABETES
Paso a Paso

TAKE YOUR FIRST STEP. The National Diabetes Education Program is urging people who are at risk for type 2 diabetes, or have a condition that increases their physical activity to prevent diabetes. Losing a small amount of weight, increasing exercise 5 days a week and eating healthy will prevent diabetes. Check with your doctor to learn if you are at risk and what steps you can take to prevent it.

HERE ARE SOME TIPS TO HELP:

- WALKING** is one of the best ways to increase your activity. Start slowly by walking five minutes more each day. Build up to 30 minutes 5 days a week.
- EAT MORE FRUITS,** vegetables, dried beans, and whole grains. Buy at least one new fruit or vegetable every time you shop.
- PICK AN ACTIVITY** that you enjoy that will keep you moving. Try soccer, like riding, swimming, or take a dance class.
- READ FOOD LABELS.** Choose foods with less fat, calories, and salt. Cut down on fried foods.

FOR MORE INFORMATION about preventing diabetes, call 1-800-458-5253 and order these materials:

- "Movimiento" music CD
- "Recipe and Meal Planner Guide"
- Your **GAME PLAN** for preventing diabetes

A message from the National Diabetes Education Program, sponsored by the National Institutes of Health and the Centers for Disease Control and Prevention. NDEP Publication No. 04-0027

PREVENIMOS LA DIABETES TIPO 2
Paso a Paso

Programa Nacional de Educación en Diabetes (NDEP) está ayudando a las personas a prevenir la diabetes tipo 2, o a controlar una condición que aumenta el riesgo de contraer la diabetes tipo 2, o que padecen de una condición que aumenta el riesgo de contraer la diabetes tipo 2. El perder peso, aumentar las actividades físicas para prevenir la diabetes. El perder peso, aumentar las actividades físicas durante 5 días a la semana y comiendo saludable ayudará a prevenir la diabetes. Consulte con su proveedor de cuidados de salud para saber más sobre cómo puede ayudar a prevenir la diabetes tipo 2.

CONSEJOS PARA AYUDAR:

- PARA AGREGAR UNOS PASOS** baje los pasos de su rutina diaria, o estacione su vehículo más lejos de la entrada de las tiendas, del cine o de su casa.
- ELIJA BOCADILLOS SALUDABLES.** Cambie los bocadillos que engordan por frutas, vegetales o nueces. Beba más agua.
- COCINE ANTES** y congele porciones de sus comidas favoritas. Así tendrá preparadas las comidas fáciles y saludables durante los días que está demasiado ocupado como para cocinar.
- COMA PORCIONES MAS PEQUEÑAS.** Usted puede comer todos los alimentos que gusta. Límite el tamaño de las porciones de carne, pollo y pescado. Estos no deben ser tan grandes que el tamaño de la palma de su mano.

PARA MÁS INFORMACIÓN sobre prevenir la diabetes, llame al 1-800-458-5253 y ordene estos materiales:

- "Movimiento" música CD
- "Guía de Recetas y Planificador de Comidas"
- Su **PLAN** para prevenir la diabetes

Un mensaje del Programa Nacional de Educación en Diabetes, un programa auspiciado por el Instituto Nacional de la Salud y los Centros para el Control y la Prevención de Enfermedades. NDEP Publicación No. 04-0027

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We Have the Power to Prevent Diabetes



We have the Power to prevent diabetes

We're American Indians and Alaska Natives, and we have the power to prevent type 2 diabetes. Science has proven that we can prevent diabetes if we lose as little as 10 pounds by walking 30 minutes 5 days a week and making healthy food choices.

"I know everyone can do it once they make up their mind. A lot of people out there know it runs in their family and they think 'Okay, I'm going to get it.' No, it's not so. You can prevent it. If I can do it, you can do it."

GLENDA THOMAS FRER
GILA RIVER INDIAN COMMUNITY AND DIABETES PREVENTION PROGRAM PARTICIPANT


Here are 7 powerful steps you can take to get started today:

- 1 MOVE MORE.** Get up, get out, and get moving. Try walking, dancing, bike riding, swimming or playing ball with your friends or family. It doesn't matter what you do as long as you enjoy it. Try different things so you don't get bored.
"I found ways to work activity into my day. I walk for 10 minutes every morning. At night, my wife and I walk with our daughter."
TOM JOHN
SENECA
- 2 EAT HEALTHY.** Focus on eating less and making healthy food choices. Try to eat more fruits and vegetables (5 to 9 servings a day), dried beans, and whole grains. Cut down on fatty and fried foods. You still can eat the foods you enjoy, just eat less.
"I used to always go back for second helpings. Now, I leave the leftovers for another day. I think it's working."
JOSEPHINE MALEMUTE, RN
ATHABASCAN
- 3 TAKE OFF SOME WEIGHT.** Once you start eating less and moving more, you will lose weight. By losing even 10 pounds, you can cut your chances of getting diabetes.
"Since losing a few pounds, I feel better and have more energy to do the things I enjoy."
LORELI DECORA
WINNEBAGO TRIBE OF NEBRASKA
- 4 SET GOALS YOU CAN MEET.** Start by making small changes. Try being active for 15 minutes a day this week. Then each week add 5 minutes until you build up to 30 minutes 5 days a week. Try to cut 100 calories out of your diet each day (that's one can of pop!). Slowly reduce your calories over time. Talk to your health care team about your goals.
"When I first started walking, I could only go for about 10 minutes. Now I feel stronger and am able to walk 45 minutes every day."
JONATHAN FEATHER
EASTERN BAND OF CHEROKEE INDIANS
- 5 RECORD YOUR PROGRESS.** Write down all the things you eat and drink and the number of minutes you are active. Keeping a diary is one of the best ways to lose weight and keep it off.
"Keeping track of my activity allows me to see how I'm doing. By walking for 10 minutes at least 3 times a day, I'm able to get my 30 minutes in."
LORRAINE VALDEZ, RN
ISLETA/LAGUNA PUEBLOS
- 6 GET HELP.** You don't have to prevent diabetes alone. Ask your family and friends to help you out. Involve them in your activities. You can help each other move more, eat less, and live a healthier life. There are groups in your area that can help as well.
"I try to be more active throughout the day. At work, I take the stairs instead of the elevator."
KELLY MOORE, MD
CREEK NATION OF OKLAHOMA
- 7 KEEP AT IT.** Making even small changes is hard in the beginning. Try adding one new change a week. If you get off track, start again and keep at it.
"When I don't think I have time to exercise, I just remember how important it is to be around for my family."
RALPH FORQUERA
JUANENO BAND OF CALIFORNIA INDIANS

"We have the power to help our people and the generations to come. We have the Power to Prevent Diabetes."

YVETTE ROUBIDEAUX, MD
ROSEBUD SIOUX

Take your first step today. Talk to your health care provider about your risk for type 2 diabetes and the small steps you can take to prevent it. For more information, call 1-800-438-5383 and ask for your free GAME PLAN for preventing type 2 diabetes.

 www.ndep.nih.gov

A message from the National Diabetes Education Program, sponsored by the National Institutes of Health and the Centers for Disease Control and Prevention. NIDDK Publication No. 04-0525



Two Reasons to Prevent Diabetes: My Future and Theirs

Are you at risk for type 2 diabetes?

To find out about your risk for diabetes, check each item that applies to you.

- My weight puts me at risk for diabetes.
- I have a parent, brother, or sister with diabetes.
- I am Asian American or Pacific Islander.
- I had diabetes when I was pregnant or I gave birth to or least one baby weighing 9 pounds or more.
- My blood pressure is 140/90 or higher or I have been told that I have high blood pressure.
- My cholesterol (lipid) levels are not normal. My HDL cholesterol ("good" cholesterol) is less than 40 (for men) or less than 50 (for women), or my triglyceride level is 250 or higher.
- I exercise fewer than three times a week.

Keep in mind: As people get older, their risk for type 2 diabetes increases.

What is pre-diabetes?

This is when blood glucose levels are higher than normal, but not high enough to be diabetes. If you have pre-diabetes, you are more likely to develop type 2 diabetes and its serious complications, such as heart disease, stroke, blindness, kidney failure, and nerve damage.

The **good news** is research shows that people with pre-diabetes can prevent type 2 diabetes by taking small steps toward living a healthy life. Ask your health care provider about your risk for pre-diabetes and diabetes and if you should be tested.

Call 1-800-438-5383 to learn more.

AT-RISK WEIGHT CHARTS

Find your height in the correct chart. If your weight is equal to or greater than the weight listed, you are at increased risk for type 2 diabetes.

IF YOU ARE ASIAN AMERICAN		IF YOU ARE PACIFIC ISLANDER		IF YOU ARE WHITE, BLACK, OR HISPANIC ISLANDER	
AT RISK BMI - 23	AT RISK BMI - 28	AT RISK BMI - 28	AT RISK BMI - 28	AT RISK BMI - 25	AT RISK BMI - 25
HEIGHT	WEIGHT	HEIGHT	WEIGHT	HEIGHT	WEIGHT
4'10"	110	4'10"	124	4'10"	115
4'11"	114	4'11"	128	4'11"	124
5'0"	118	5'0"	133	5'0"	128
5'1"	122	5'1"	137	5'1"	132
5'2"	126	5'2"	142	5'2"	136
5'3"	130	5'3"	146	5'3"	141
5'4"	134	5'4"	151	5'4"	145
5'5"	138	5'5"	155	5'5"	150
5'6"	142	5'6"	161	5'6"	155
5'7"	146	5'7"	166	5'7"	158
5'8"	151	5'8"	171	5'8"	164
5'9"	155	5'9"	176	5'9"	169
5'10"	160	5'10"	181	5'10"	174
5'11"	165	5'11"	186	5'11"	177
6'0"	170	6'0"	191	6'0"	181
6'1"	174	6'1"	197	6'1"	185
6'2"	178	6'2"	202	6'2"	189
6'3"	184	6'3"	208	6'3"	194
6'4"	189	6'4"	213	6'4"	198

Source: Adapted from "Diabetes Control and Prevention, Early Treatment of Complications and Risks in Adults: An Evidence Report"



A message from the National Diabetes Education Program, National Institutes of Health and the Centers for Disease Control and Prevention. NIDDK Publication No. 14-5524

Be more active. Choose an activity you enjoy. Take a walk, swim, bike ride, dance, or play ball with your children. Be physically active 30 minutes a day, 5 days a week.

現在採取以下小步驟 預防糖尿病

找出自己的得病風險。
體重過重的華人是第二型糖尿病的高危險群。
請和您的保健提供者討論自己得病的風險。
有關詳情請見背面的風險測試。

減輕體重。
體重過重會增加第二型糖尿病的得病機率。
您以為正常的體重不見得就是健康的體重。
請從背面的圖表檢查您的體重是否有得
糖尿病的危險。最少只要減輕十磅體重
就能降低得病風險。您可以靠著多活動
和健康的飲食來減重。

多做活動。選一項您喜歡的活動，
例如散步、游泳、騎腳踏車或和孩子
一起打球。一週五天，每天做三十分鐘
的體能活動。

吃得健康。選擇健康的食物，而且份量
不要太多。少吃油膩和油炸的食物。多吃
蔬菜、水果、乾豆和全穀類。



紀錄進度。每一天都寫下您吃過的所有食物，以及活動的時間長度。寫日誌是減輕體重以及持之以恆的最好方法之一。

持之以恆。每週做一項新改變。如果您
偏離目標，請重新開始，繼續努力。

索取預防第二型糖尿病的免費「GAME PLAN」(戰略計劃)
請致電 1-800-438-5383 (只限於英文人士。)

請上網 www.ndep.nih.gov 查詢糖尿病的中文資料。

您會獲得終生的成果。

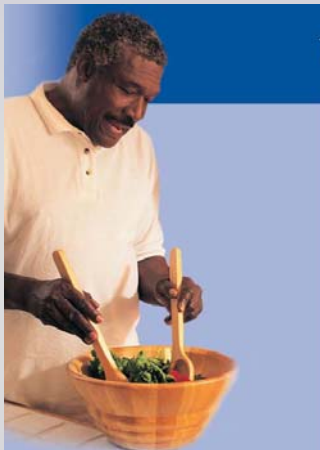


A message from the National Diabetes Education Program, sponsored by the National Institutes of Health and the Centers for Disease Control and Prevention.



It's Not Too Late to Prevent Diabetes.

Take Your First Step Today.



Want to start moving more, but don't know how? It doesn't have to be hard or boring to work for you. The National Diabetes Education Program (NDEP) is urging adults 60 and over who are at risk for type 2 diabetes, or have a condition called pre-diabetes, to increase their physical activity to prevent diabetes.

If you are not very active, start off slowly with an activity that gets you moving for 10 minutes 5 days a week and build up to the recommended 30 minutes. Moving around, even for only a few minutes a day, is a healthy start to becoming more fit and preventing diabetes.

Tips for People at Risk of Developing TYPE 2 DIABETES



START NOW to get moving and have fun!

WARM UP. Warm-ups get your body ready for physical activity. Shrug your shoulders, tap your toes, swing your arms, or march in place. Spend a few minutes warming up for any activity, even walking.

DANCE. Dancing increases strength, energy, and movement. It is a fun way to exercise without realizing it. Take a dance class with a buddy. Or get off the couch, turn on the radio and dance in your living room.

WALK. This is one of the best ways to increase your activity. There are many ways to add walking to your day. Be sure you have the proper shoes for walking. Find a safe place to enjoy your walk, such as a shopping mall or a community center.

STRETCH. You don't need a special time or place to stretch. At home or at work, stand up, push your arms toward the ceiling, and stretch. Stretch slowly. You should not feel pain. Hold the stretch without bouncing for about 30 seconds. Stretch after any brisk activity.



EASY STEPS to increase activity!

- Put away the TV remote control—get up to change the channel. March in place during commercial breaks.
- Try walking around the house while you talk on the phone.
- Park the car farther away from stores, movie theatres, or your home.
- Get off the bus one stop early, if you are in a safe place to walk.
- Visit museums, the zoo, or an aquarium. These are great ways to be active with your family.

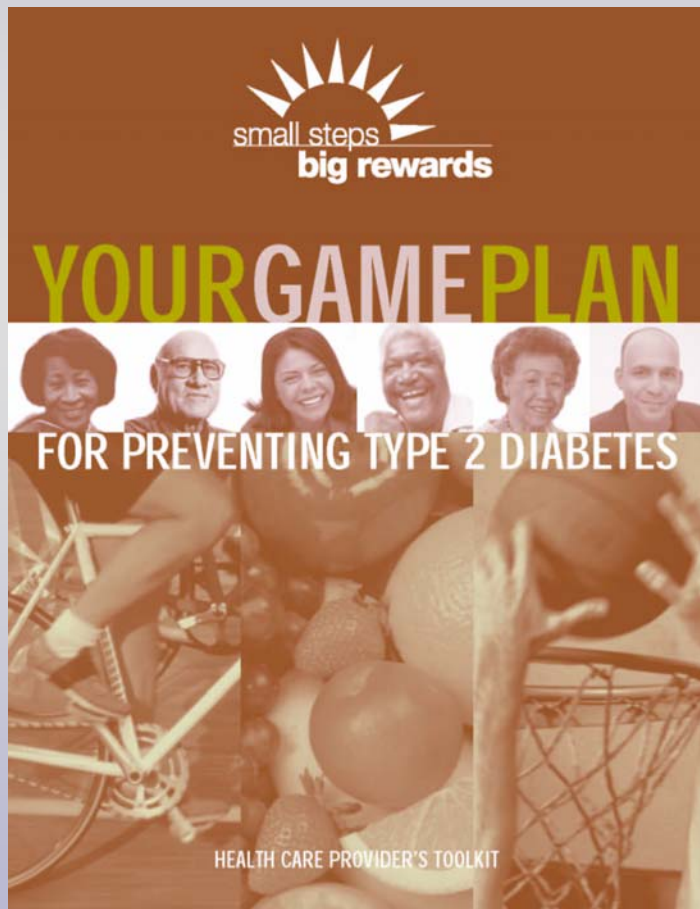


EAT RIGHT to prevent type 2 diabetes!

Making healthy food choices and cutting down on the amount of food you eat will help manage your weight loss and prevent type 2 diabetes. Try some of these tips to get started.

- You don't have to cut out the foods you love to eat. Just cut down on the amount you eat, and eat them less often.
- Try to keep meat, poultry, and fish servings down to three ounces—that's about the size of a deck of cards.
- Try to eat three sensible meals at regular times throughout the day.
- Eat more fresh fruit, veggies, nuts, and whole grains.
- Limit fried foods. Baking and broiling are healthier ways to eat meat, chicken, and fish.
- When eating out, share large portions.
- Drink six to eight glasses of water every day.

Your GAME PLAN for Preventing Type 2 Diabetes



Goals,
Accountability,
Monitoring, and
Effectiveness:

Prevention through a
Lifestyle of
Activity and
Nutrition

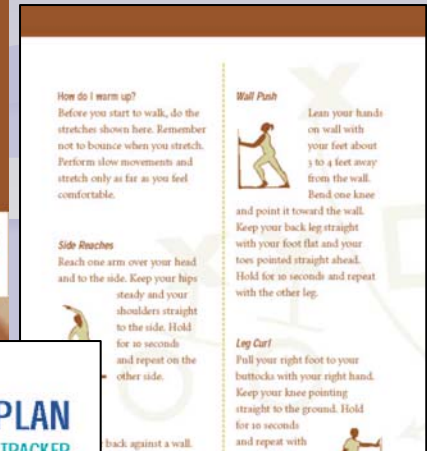
GAMEPLAN Toolkit: Materials for Healthcare Providers

- Science behind DPP Clinical Trial
- “Decision Pathway” to help identify at-risk patients
- How to Talk to Patients
- Diabetes Prevention Q&A
- Patient Handouts



GAMEPLAN Toolkit: Materials for Patients

- Overview of the GAMEPLAN
- Risk Assessment Tool
- “Walking... A Step in the Right Direction”
- Food Diary
- Calorie Counter



small steps big rewards
Prevent Type 2 Diabetes

MY GAME PLAN

FOOD AND ACTIVITY TRACKER

NAME: _____

DATE: _____

FROM: _____ TO: _____

MY GAME PLAN THIS WEEK...

FOR CUTTING FAT GRAMS: _____

FOR CUTTING CALORIES: _____

FOR GETTING MORE PHYSICAL ACTIVITY: _____

SAMPLE ENTRY:

day: Monday DATE: February 3, 2003

DAILY FOOD AND DRINK TRACKER			
TIME	AMOUNT/NAME/DESCRIPTION	FAT GRAMS	CALORIES
8:00 AM	1/2 cup oatmeal	1	73
	1 cup 2% milk	5	121

TO MAKE MORE TRACKERS: Make one (1) copy of this page. Place it on top of seven (7) copies of the next page. Toss the pages and staple in the upper left-hand corner. Fold to fit in your pocket or purse.

AT-RISK WEIGHT CHARTS

Find your height in the correct chart. If your weight is equal to or greater than the weight listed, you are at increased risk for type 2 diabetes.

IF YOU ARE 5'0" TALL OR SHORTER		IF YOU ARE 5'1" TALL		IF YOU ARE 5'2" TALL OR TALLER	
WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT	WEIGHT
4'10"	119	4'10"	130	4'10"	134
4'11"	124	4'11"	134	4'11"	138
5'0"	128	5'0"	138	5'0"	143
5'1"	133	5'1"	143	5'1"	147
5'2"	138	5'2"	148	5'2"	152
5'3"	143	5'3"	153	5'3"	157
5'4"	148	5'4"	158	5'4"	162
5'5"	153	5'5"	163	5'5"	167
5'6"	158	5'6"	168	5'6"	172
5'7"	163	5'7"	173	5'7"	177
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6'0"	188	6'0"	198	6'0"	202
6'1"	193	6'1"	203	6'1"	207
6'2"	198	6'2"	208	6'2"	212
6'3"	203	6'3"	213	6'3"	217

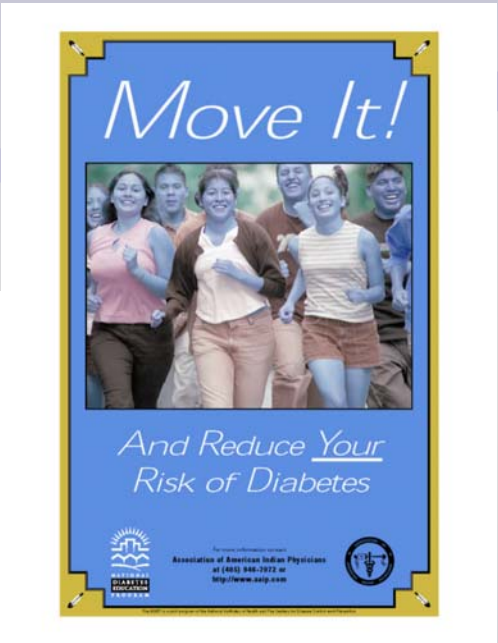
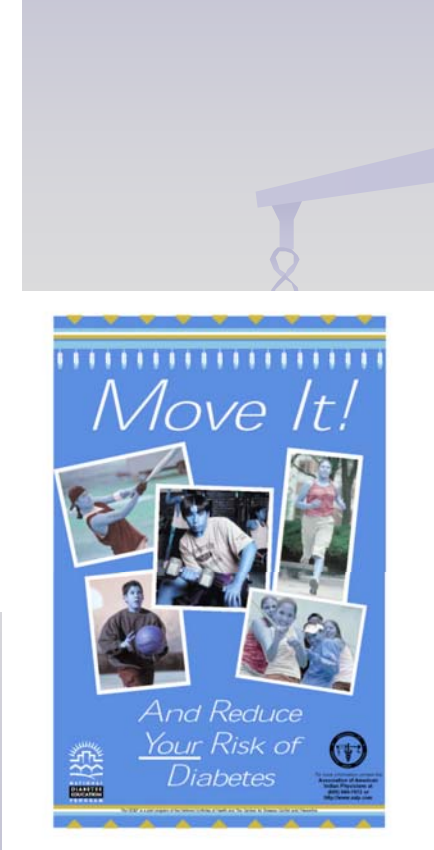
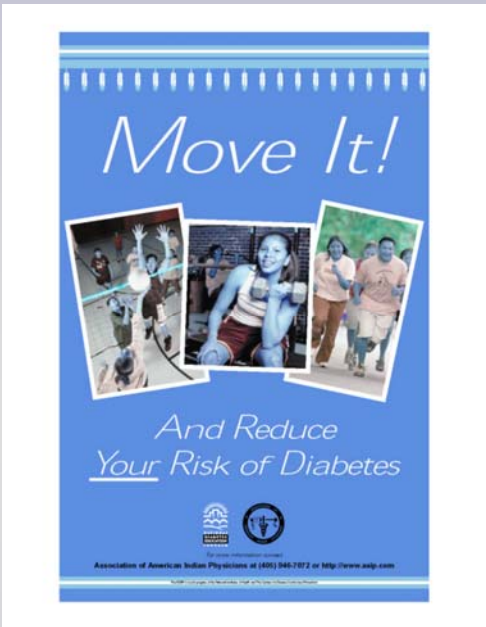
Source: Adapted from Clinical Guidelines for the Identification, Evaluation, and Treatment of Diabetes and Pre-diabetes. The Diabetes Report.

New Initiatives



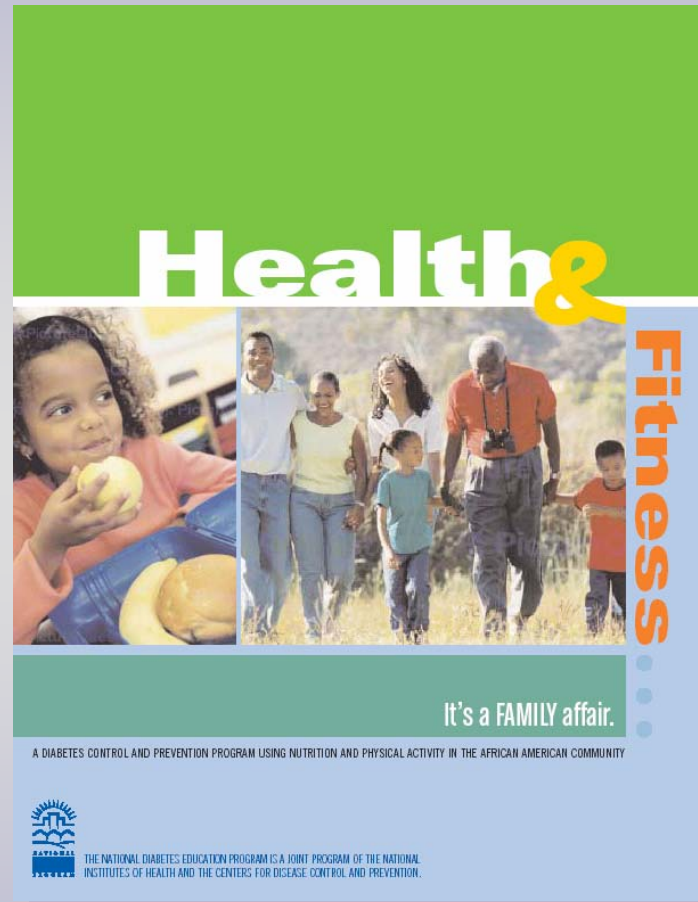
small steps
big rewards
Prevent type 2 Diabetes

Community Interventions



American Indian and Alaska Native

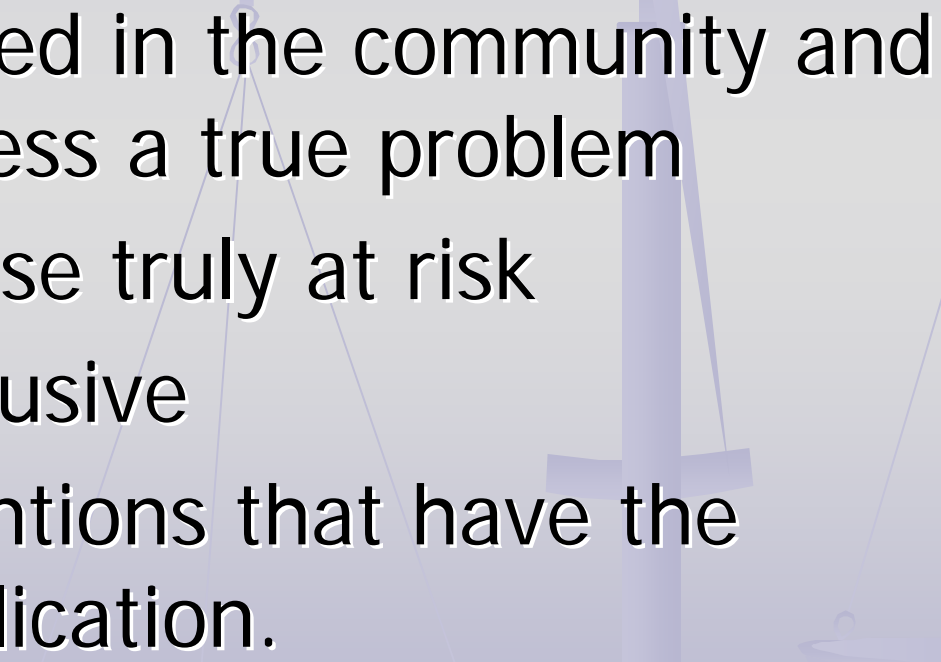
Community Interventions



African American

What does it take to have a successful translation of medical research?

It takes clinical research that:

- Recognizes a need in the community and sets out to address a true problem
 - Accounts for those truly at risk
 - Is purposely inclusive
 - Chooses interventions that have the potential for replication.
- 

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- **Lorraine Valdez, MPA, RN, CDE**
- Indian Health Service
- **Elizabeth M. Venditti, PhD**
- University of Pittsburgh
- **Frank Vinicor, MD, MPH**
- Centers for Disease Control and Prevention