









# Today's presenter:

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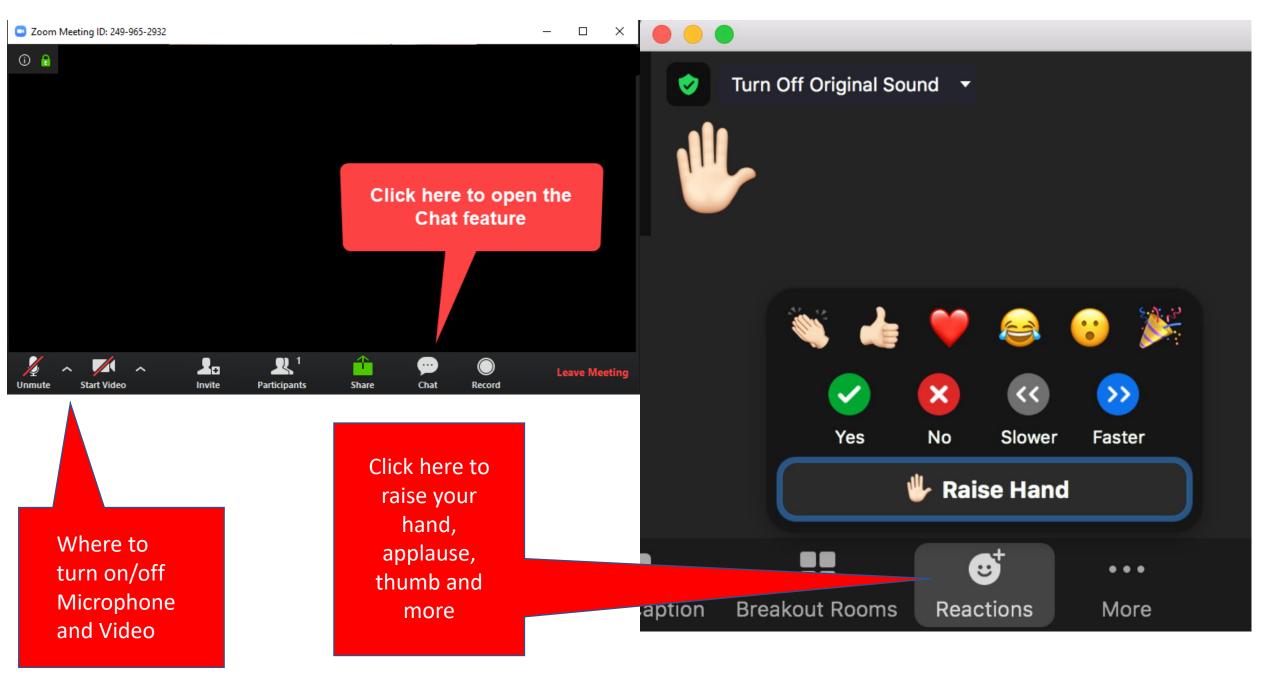
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# Housekeeping

- The presentation today will last 90 minutes
  - The presentation is being recorded
- Please put your cell phone on silent or vibration
- Please mute your microphone until you need to participate in activities
- We highly encourage participation
- We will have a 20-minute Q/A session at the end

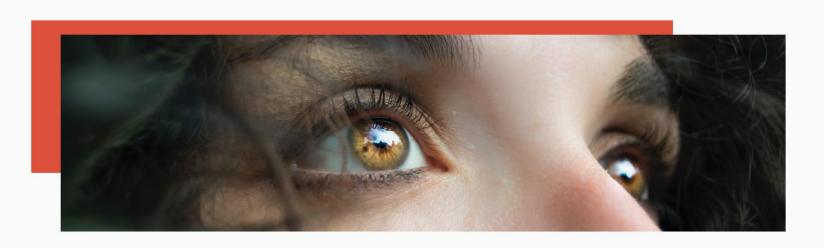


National Association of Community Health Workers (NACHW)

# It's easy to take your eyesight for granted

**Get Smart About Eye Health** 





# Getting to know YOU

Where are you logging in from?

How long have you been a Community Health Worker?

Briefly tell us what led you to attend this presentation?

# Objectives

- Know the Risk for Diabetes
- Know the Warning Signs of Diabetic Eye Disease
- Take Control of Eye Health

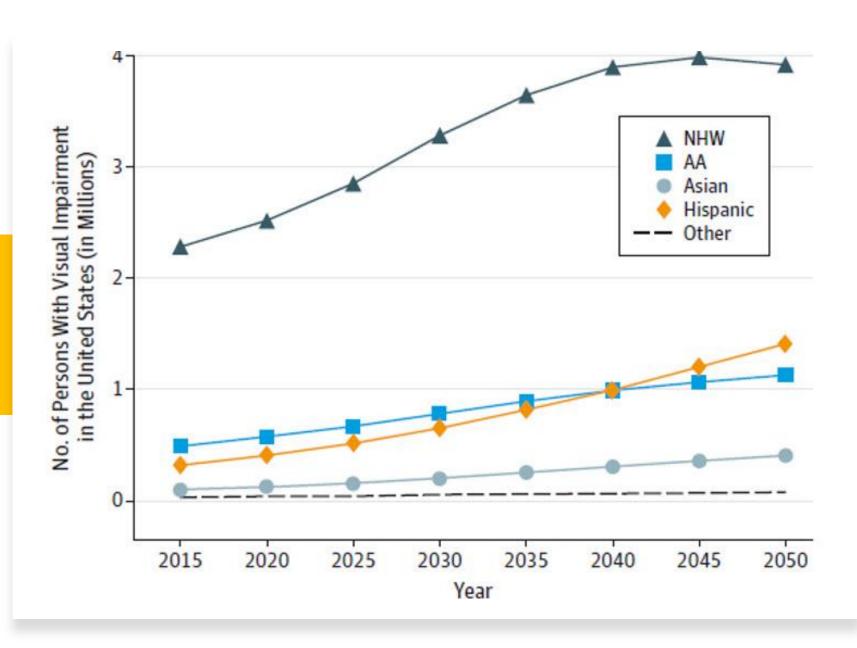
#### Facts on Diabetes

#### Diabetes

- Total: 37.3 million people have diabetes (11.3% of the US population)
- Diagnosed: 28.7 million people, including 28.5 million adults
- Undiagnosed: 8.5 million people (23.0% of adults are undiagnosed)

#### **Prediabetes**

- **Total:** 96 million people aged 18 years or older have prediabetes (38.0% of the adult US population)
- **65 years or older:** 26.4 million people aged 65 years or older (48.8%) have prediabetes



Estimated Number of Persons With Visual Impairment in the United States

Table 1. Current Estimate and Projections of Prevalent Populations with Vision Problems

	Current Estimates	Projections		
	2010	2014	2032	2050
Cataract	24,409,978	25,666,427	38,477,608	45,620,606
Diabetic Retinopathy	7,685,237	8,084,767	10,938,504	13,190,538
Impaired	2,907,691	3,058,852	5,073,572	7,301,814
Glaucoma	2,719,379	2,858,572	4,275,758	5,526,347
AMD*	2,069,403	2,176,985	3,387,560	4,425,989
Blind	1,288,275	1,355,248	2,161,164	3,088,249

<sup>\*</sup>Age-related macular degeneration

Source: Wittenborn, John S. & Rein, David B. *The Future of Vision: Forecasting the Prevalence and Cost of Vision Problems*. NORC at the University of Chicago. Prepared for Prevent Blindness, Chicago, IL. June 11, 2014.

http://forecasting.preventblindness.org.



Vision can change as we age.

Vision loss and blindness are not a normal part of aging.



- Focusing on objects up close is harder to do.
- Noticing declining sensitivity.
- Needing more light to see well.
- Needing more time to adjust to changing levels of light.





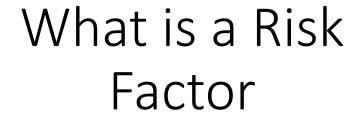








# Take care of your vision



A risk factor is a behavior or condition that increases a person chances of developing a disease or injury.

#### American Diabetes Association

#### Connected for Life.

# Know the Risk for Diabetes

Diabetes is the leading cause of vision loss in people **18–64 years old.** 

There are no obvious signs or symptoms.



You're at High Risk with a score of 6.

Your health can't wait. Talk to your doctor today.

## Woman 60 Second test Question 1 and 2

#### How old are you?

- Less than 40 years
- 40-49 years
- 50-59 years
- 60 years and older

#### What is your gender?

- Woman
- Man

# Woman 60 Second test Question 2A and 3

Have you ever been diagnosed with gestational diabetes?

- No
- Yes

Do you have a mother, father, sister or brother with diabetes?

- No
- Yes

# Woman 60 Second test Question 5 and 6

Have you ever been diagnosed with high Blood Pressure?

- No
- Yes

Are you physically inactive?

- No
- Yes

What race or ethnicity best describes you?

- White
- Asian
- Hispanic and or Latino
- American Indian or Alaska Native
- Black or African American
- Native Hawaiian or other Pacific Islander
- Other
- Prefer not to say

## Woman 60 Second test Question 7 and 8

Tell us more about you?

- Height
- Weight

Send my test results and tips for preventing diabetes

- Email
- Zip code
- Country (will auto populate)

**Email My Results** 

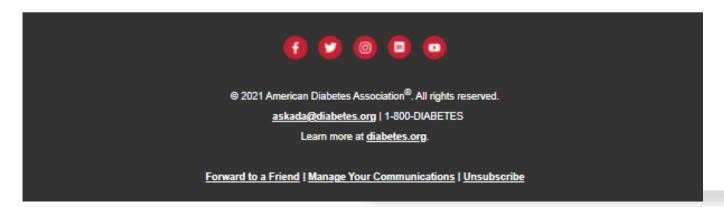


#### Connected for Life.

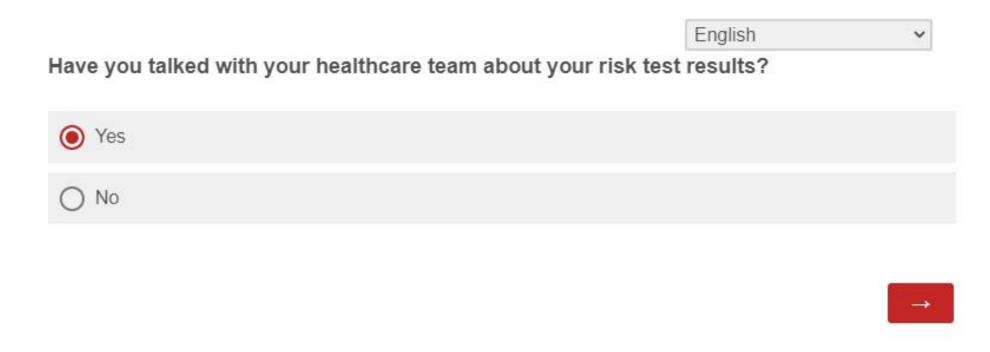
Hello Mercedes,

We are following up with you today to learn what, if any, actions you've taken because of your Diabetes Risk Test result from the American Diabetes Association<sup>®</sup> (ADA). Please help us to better serve people who may be at risk for prediabetes or diabetes by answering a <u>few questions</u>.

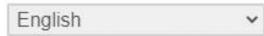
All answers are confidential and to thank you for your time, at the end, you will have the option to enter for a chance to win a \$100 Amazon.com eGift Card. See promotion <a href="Terms and Conditions">Terms and Conditions</a>.







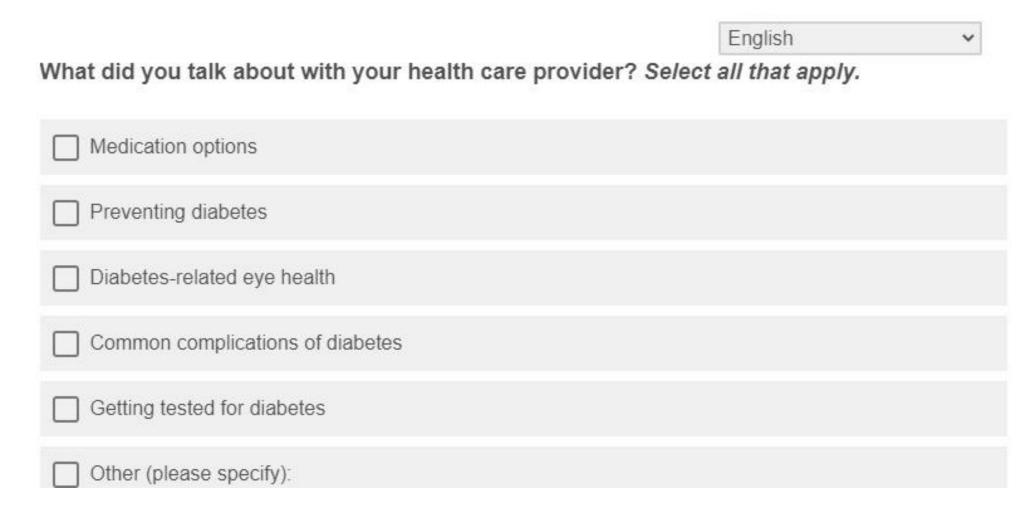




Which healthcare provider(s) did you talk to about your diabetes risk test results? Select all that apply.

Primary Care Provider (e.g. physician, nurse practitioner, physician assistant)
Eye doctor (i.e. ophthalmologist, optometrist)
Cardiologist
Endocrinologist
Registered Dietitian or Nutritionist







National States	
English	~

To the best of your knowledge, which of these are symptoms of undiagnosed diabetes? Please select all that apply.

Back pain	
Feeling very thirsty	
Shortness of breath	
Constantly feeling tired	
Blurry vision	
Urinating often	
Tingling, pain, or numbness in the hands/feet	
Feeling very hungry—even though you are eating normally	
Occasional dizzy spells or nausea	



English		~	
		41	

When a person is first diagnosed with type 2 diabetes, when should they have their eyes examined?

At the time of diabetes diagnosis
O Within 5 years after diabetes diagnosis
Only if they have eye symptoms
O An eye exam is not necessary
O Don't know







True or False: Diabetes-related eye diseases can have no visual signs or symptoms.





English	~
9	

Blurred vision is a prominent symptom of undiagnosed diabetes. For those at high-risk, an annual eye exam is a must - offering a simple way to help detect potential problems early.

How likely are you to talk with an eye doctor about diabetes-related eye disease risk and prevention? Please use a scale of 1-5 with 1 = Not at all likely and 5 = Very likely.

1 - Not at all likely	
O 2	
O 3	
O 4	
5 - Very likely	





Have you registered for a Diabetes Self-Management Education and Support program? This program usually requires a referral from a healthcare provider.

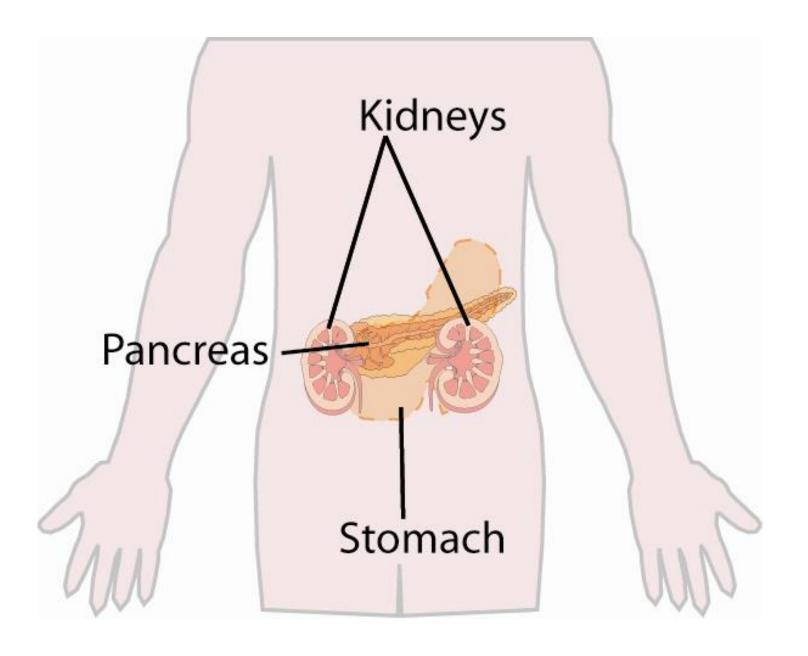
O Yes	
○ No	
O No, but I intend to	
O I don't know what this program is	



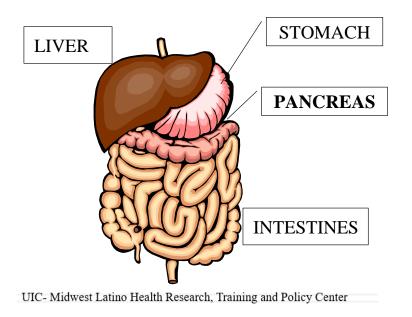


# What is Diabetes?

Diabetes is a disease in which the body does not produce or properly use insulin.



#### **DIGESTIVE ORGANS**



When you eat, food is turned into glucose (sugar) to give your body energy

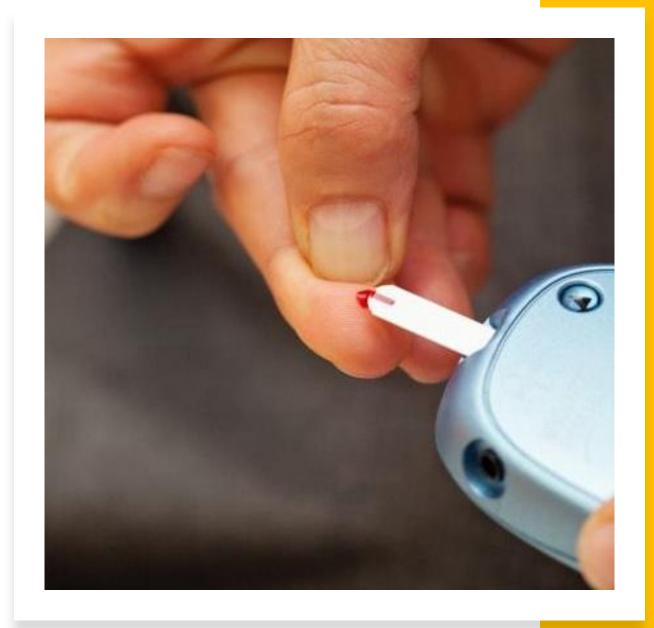
With diabetes, the body does not use the energy well

#### What is Diabetes?

What is Diabetes - YouTube

# The path to understanding diabetes starts here.

- Understanding type 1
- Understanding type 2
- Understanding gestational diabetes
- Understanding diabetes from other causes\*
- Understanding prediabetes





#### **Gestational diabetes**

Is diabetes that develops during pregnancy.

#### **Prediabetes**

Prediabetes is a condition that occurs when a person's blood glucose levels are higher than normal.

#### Type 1 diabetes

Results from the body's **failure to produce insulin**.

#### Type 2 diabetes

Results from **insulin resistance** (the body does not properly use insulin).

# So, what affects my blood sugar levels?

It is important to understand what can make blood sugar rise or fall, so that steps can be taken to stay on target.

### What do the numbers mean?

A1C	Average Blood Glucose (eAG)	
6%	126 mg/dL	
6.5%	140 mg/dL	
7%	154 mg/dL	
7.5%	169 mg/dL	
8%	183 mg/dL	
8.5%	197 mg/dL	
9%	212 mg/dL	
9.5%	226 mg/dL	
10%	240 mg/dL	
10.5%	255 mg/dL	

#### What is a good target for A1C?

The American Diabetes Association® (ADA) recommends a target for A1C of less than 7% for most adults.



**DIABETES** 

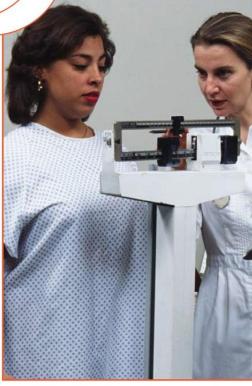
Family background



High blood pressure



Gestational diabetes



Obesity, high cholesterol, and high triglycerides

# Risk Factors for Developing Type 2 Diabetes

# Risk Factors for Type 2 Diabetes

- Being 45 years of age or older.
- Having a parent, brother, or sister with diabetes.
- Having an African American, Hispanic/Latino, American Indian, Asian American, or Pacific Islander background.
- Having diabetes while pregnant (gestational diabetes).
- Having a baby that weighed 9 pounds or more at birth.

### Risk Factors for Type 2 Diabetes

- Being told that glucose levels are higher than normal (pre-diabetes).
- Having high blood pressure.
- Having high cholesterol (lipid) levels.
- Inactive/sedentary.
- Having blood vessel problems affecting the heart, brain, or legs.





Risk Factors for Type 2 Diabetes

The skin around the neck or armpits appears dirty no matter how much it is scrubbed.

The skin appears dark, thick, and velvety. This is called acanthosis nigricans.





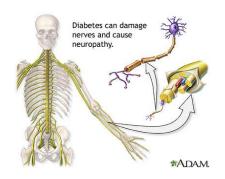


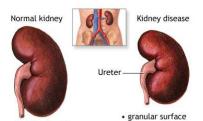
ABC of Diabetes

A = A1C

Blood Pressure (BP)

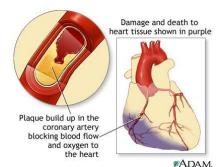
C = Cholesterol





- healthy function
- low urine protein
- decreased functi
  - high urine protein

\*ADAN



A slitlamp is used to view the interior of the eye

### Common Diabetes Complications

- Retinopathy (blindness)\*
- Neuropathy (nerve damage)\*
- Nephropathy (kidney problems)\*
- Feet ulceration and/or amputations
- Cardiovascular Disease (heart problems)
- Heart attack\*
- Stroke\*
- Erectile dysfunction (inability to have an erection)

## Treatment 7 Self-Care Behaviors

- Healthy eating
- Being active



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Treatment
7 Self-Care
Behaviors

- Monitoring
- Taking medication



- Problem solving
- Reducing risks
- Healthy coping





## Treatment 7 Self-Care Behaviors



## Type 2 diabetes can be prevented or delayed:

- Modest weight loss
- Increasing physical activity
- Making healthy food choices.

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### Q1

# What are normal vision changes of getting older?

**EMMMAS** 

Correct sensitivity

VISIMOLOGIS



### Yearly Dilated Eye Exam







This Photo by Unknown Author is licensed under CC BY-SA

People with diabetes need to know...

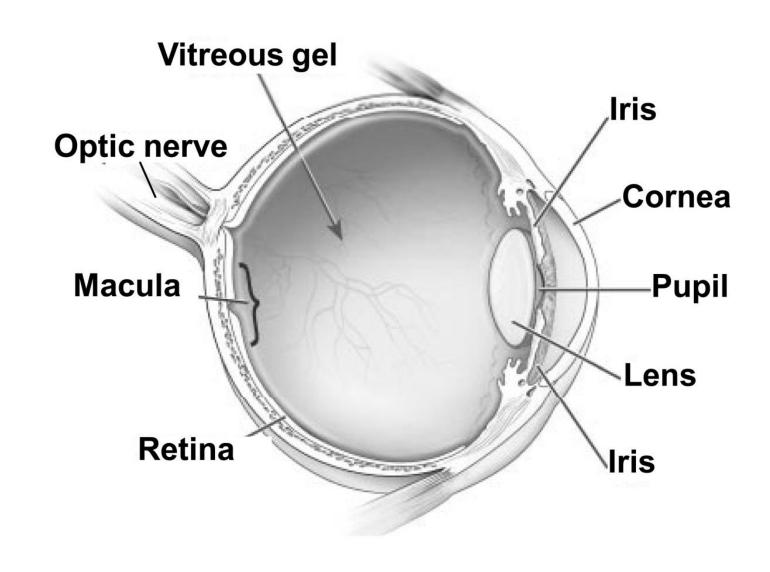
# Vision is wonderful, but it could be lost if a person has diabetes.



This Photo by Unknown Author is licensed under CC BY-SA-NC

# Anatomy of the Eye and Its Function

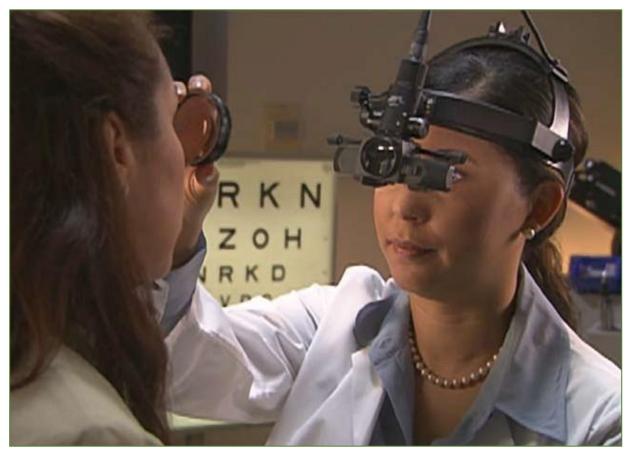
- The main parts of the eye—
- Vitreous gel
- Iris
- Cornea
- Pupil
- Lens
- Iris
- Retina
- Macula
- Optic Nerve



### The Dilated Eye Exam



Don't wait for symptoms to see an eye care professional.



Have a dilated eye exam at least once a year.



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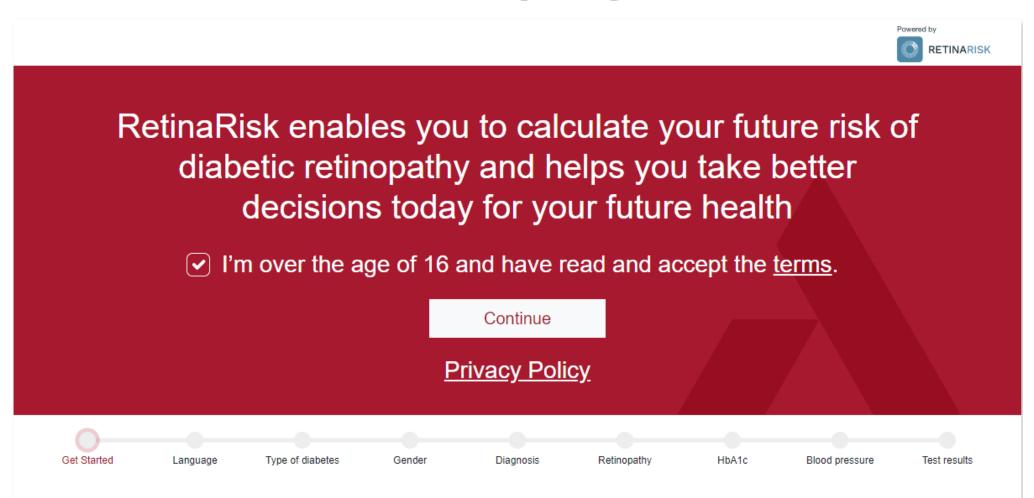


# Who can develop diabetic retinopathy?

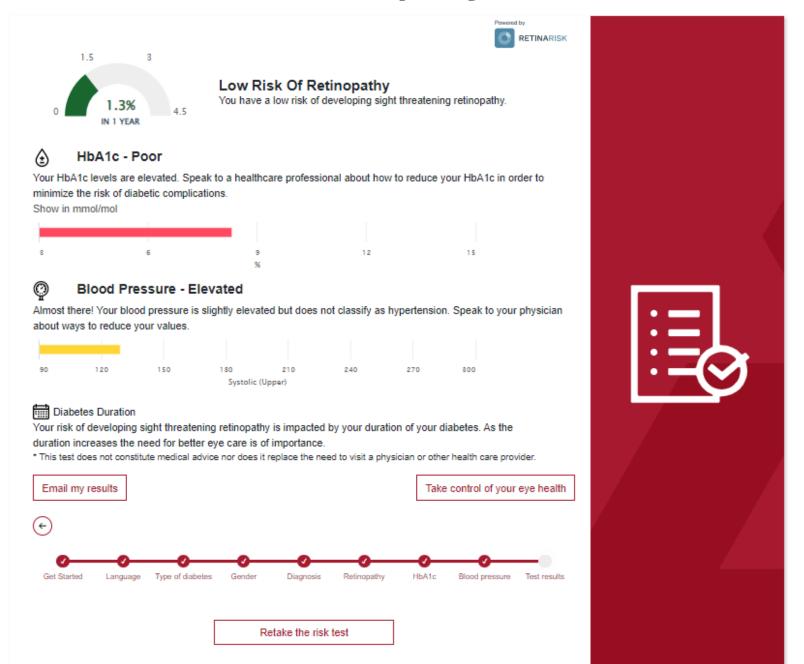
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### Calculate Your Risk for Diabetic Retinopathy

### **Diabetic Retinopathy Risk Test**

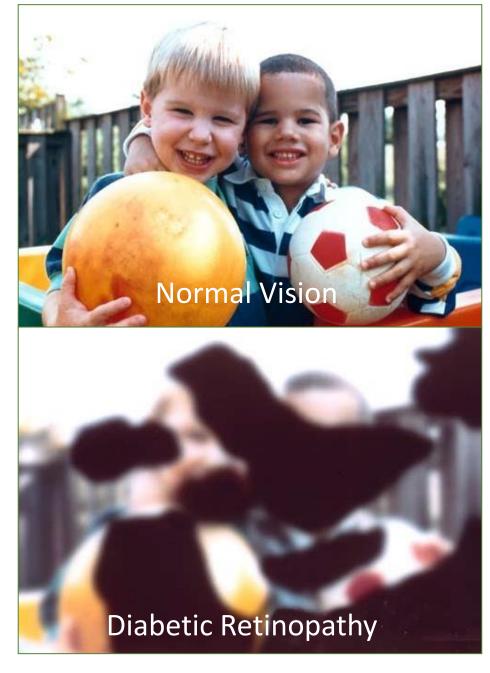


### **Diabetic Retinopathy Risk Test**

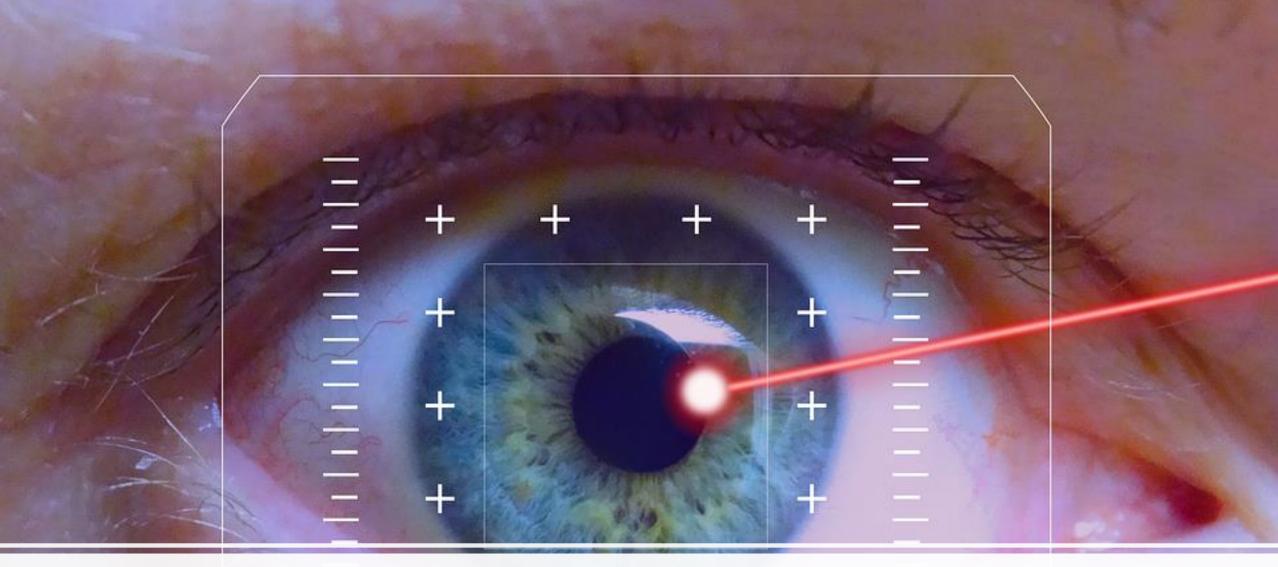


### Diabetic Retinopathy

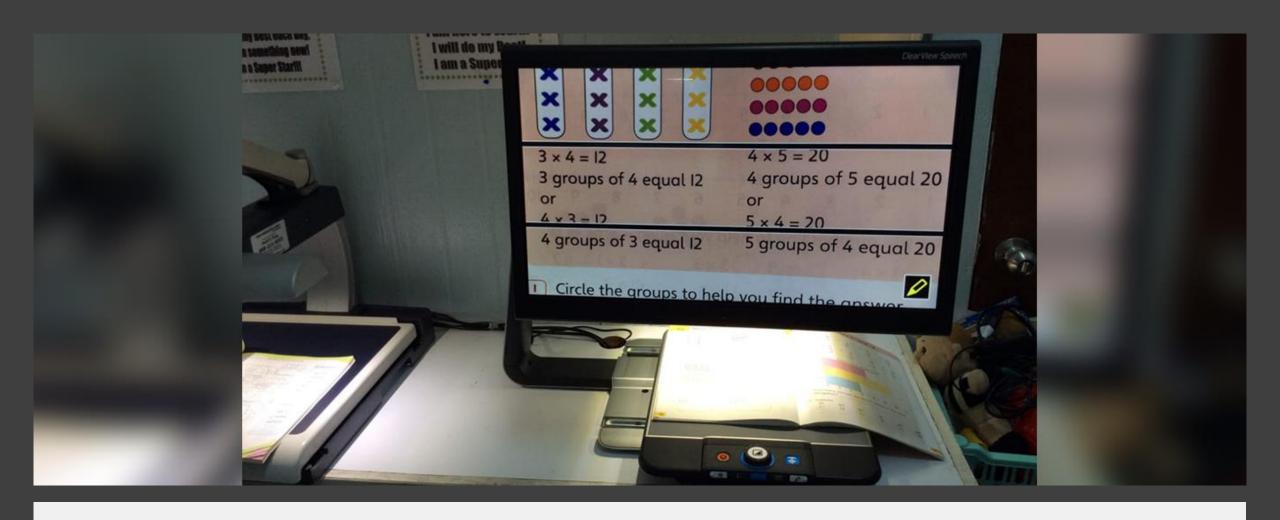




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How is diabetic retinopathy treated?



What Is Low Vision?

Vision that is **not corrected** by eyeglasses, contact lenses, medication, or surgery.

Low vision may make everyday tasks difficult to do.

## What Causes Low Vision?

Sometimes vision loss occurs because of eye injuries or birth defects.

Most people develop low vision because of the following:

- Age-related macular degeneration
- Cataract
- Diabetic eye disease
- Glaucoma

### Signs of Low Vision

Even with regular glasses or contact lenses, a person has difficulty with the following:

- Recognizing familiar faces
- Reading
- Cooking
- Picking out and matching the color of your clothes
- Reading street signs

### What Is a Low Vision Assessment?

A low vision assessment determines the extent of vision loss and potential for vision rehabilitation.

### Examples of low vision devices:

Glasses with high powered lenses



Special software for computers



Other devices



Telescopic lenses





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# Q2 What do you believe causes Diabetes?

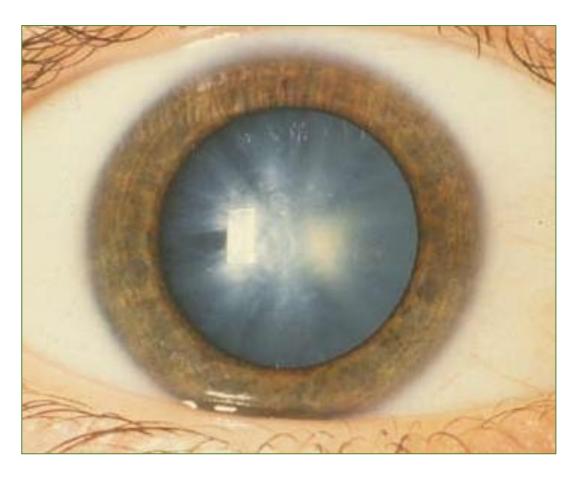
Catching it from someone ese

Genetics and lifestyle factors

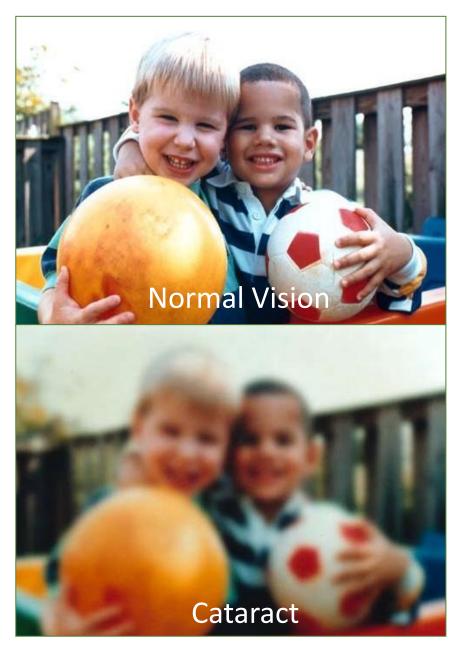
A Wat oingse

Correct resistance

### Diabetes and Cataract



A cataract is a clouding of the lens. People with cataract see through a haze.

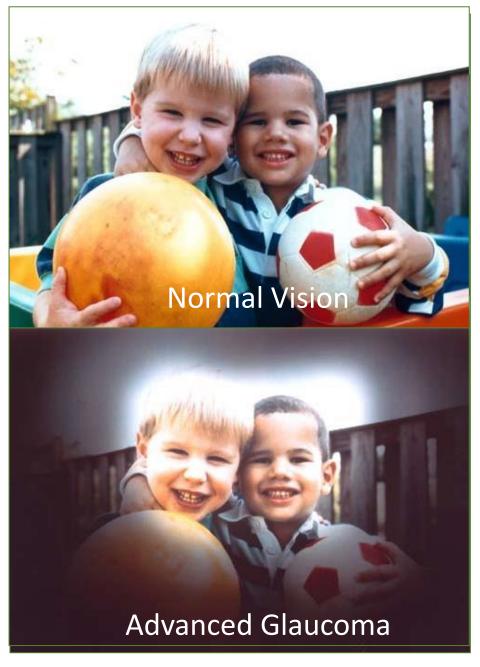


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### Diabetes and Glaucoma



Glaucoma is a group of diseases that can damage the optic nerve and result in vision loss and blindness.



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### The Eye Health Team

## Health professionals who are part of an eye health team include:

- Certified diabetes educator
- Health promoter/CHW
- Nurse
- Ophthalmologist
- Optometrist
- Pharmacist
- Primary care provider
- Social worker



What can someone do to protect their vision?



## Diabetes and High Blood Pressure



### What Is High Blood Pressure?

High blood pressure means that the heart <u>must pump harder</u> than normal for blood to get to all parts of the body.



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What Causes
High Blood
Pressure?

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### Factors that contribute to high blood pressure are:

- Salt in the diet\*
- Being overweight or obese\*
- Heavy alcohol consumption\*
- Race
- Age
- Gender
- Smoking\*
- Diabetes\*
- Family history





### Spice It Up! - Not Salt It UP!!!



### **Vegetables**

- Carrots Cinnamon, cloves, marjoram, nutmeg, rosemary, sage
- Corn Cumin, curry powder, onion, paprika, parsley
- Green beans Dill, curry powder, lemon juice, marjoram, oregano, tarragon, thyme, Greens Onion, pepper
- Peas Ginger, marjoram, onion, parsley, sage
- Potatoes Dill, garlic, onion, paprika, parsley, sage, curry powder, marjoram, nutmeg,
- Squash rosemary, sage



- Winter squash Cinnamon, ginger, nutmeg, onion
- Tomatoes Basil, bay leaf, dill, marjoram, onion, oregano, parsley, pepper

### (Protein) Meat, Poultry, and Fish

- Beef Bay leaf, marjoram, nutmeg, onion, pepper, sage, thyme
- Lamb Curry powder, garlic, rosemary, mint
- Pork Garlic, onion, sage, pepper, oregano
- Veal Bay leaf, curry powder, ginger, marjoram, oregano
- Chicken Ginger, marjoram, oregano, paprika, poultry seasoning, rosemary, sage, tarragon, thyme
- Fish Curry powder, dill, dry mustard, lemon juice, marjoram, paprika, pepper
- Tofu Paprika, black pepper, garlic powder, onion powder, cayenne pepper, dried oregano

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## Using a wrist cuff to measure blood pressure\*

Self-measured blood pressure

\* When an upper arm cuff cannot be used, validated wrist devices can be used for blood pressure estimation.



### Correct forearm position

for wrist blood pressure measurement

- 1. Apply the wrist device
- Keep elbow on table or desk with forearm bent
- 3. Place the wrist at heart level
- Keep arm relaxed and hand resting against your body
- Measure wrist blood pressure without moving arm from seated position

### BEND OF THE ELBOW.

Association.

Wrist higher than heart level



Incorrect forearm position'

Forearm in horizontal position



Forearm vertical and close to the body



BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120-129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130-139	or	80-89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

SIT CALMLY AND DON'T TALK.

RELAXED, SIT STILL IN A



\*Wait a few minutes and take blood pressure again.
If it's still high, contact your doctor immediately.

LEARN MORE AT HEART.ORG/HBP

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## **Blood Pressure Categories**



BLOOD PRESSURE CATEGORY	SYSTOLIC mm Hg (upper number)		DIASTOLIC mm Hg (lower number)
NORMAL	LESS THAN 120	and	LESS THAN 80
ELEVATED	120-129	and	LESS THAN 80
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1	130-139	or	80-89
HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2	140 OR HIGHER	or	90 OR HIGHER
HYPERTENSIVE CRISIS (consult your doctor immediately)	HIGHER THAN 180	and/or	HIGHER THAN 120

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heart.org/bplevels



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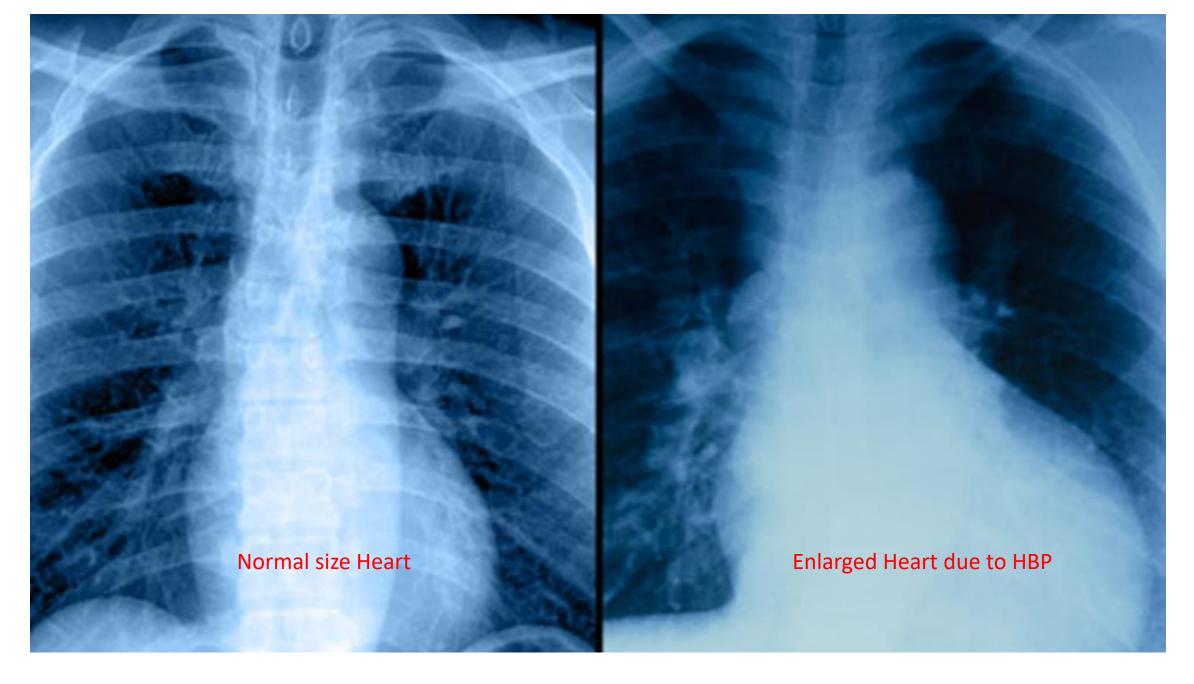
## What Are the Signs of High Blood Pressure?

- Tiredness
- Confusion
- Nausea or upset stomach
- Vision problems or trouble seeing
- Nosebleeds
- More than normal sweating
- Headache

- Dizziness
- Skin that is flushed or red, or skin that is pale or white
- Anxiety or nervousness
- Palpitations (strong, fast, or obviously irregular heartbeat)
- Ringing or buzzing in ears
- Impotence

# Why Is High Blood Pressure Harmful?

- High blood pressure causes the heart to work harder than normal
- High blood pressure increases the risk of heart attacks, strokes, kidney damage, eye damage, heart failure, and atherosclerosis

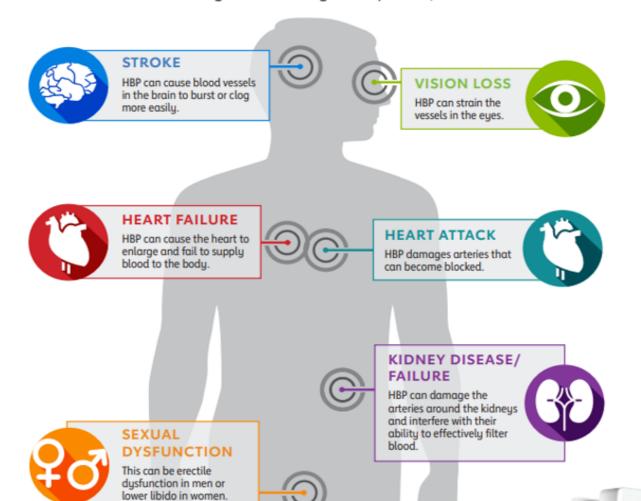


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### **Consequences of High Blood Pressure**

High blood pressure is often the first domino in a chain or "domino effect" leading to devastating consequences, like:





# High Blood Pressure can be **Prevented**, **Treated**, and **Controlled**?





## Q3

# What are the top and bottom number of a blood pressure reading called? Click all that applies

**VA/sonlar** 

Systelic

**Witerigl** 

Diastedit



# Keep your eyes healthy

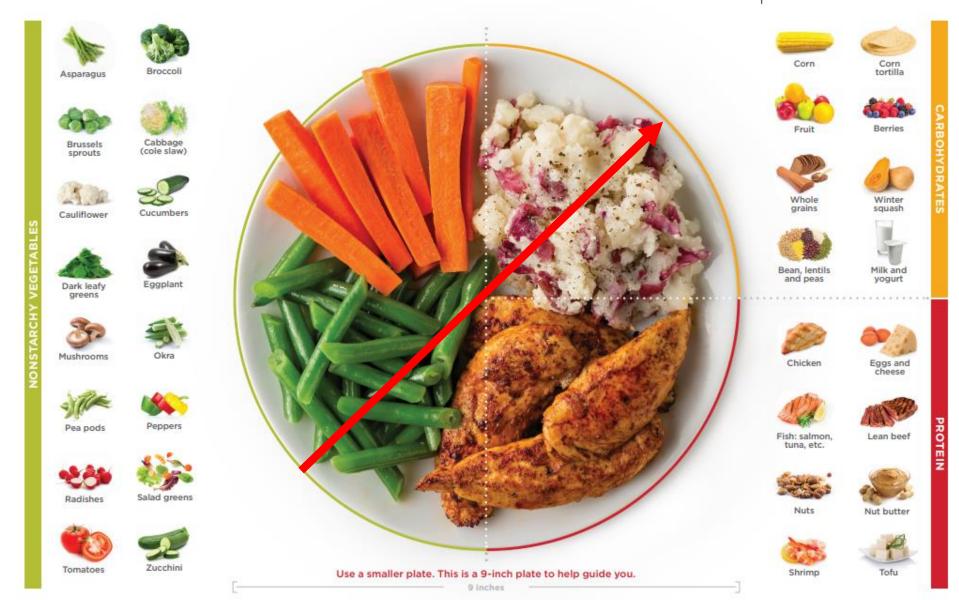
There are lots of ways to keep your eyes healthy

- from wearing your sunglasses
- to eating eye-healthy foods, like salmon and kale

## **Plan Your Portions**



### What Can I Eat



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### **Plan Your Portions**



Your fist is a handy tool that is always with you. Place your fist on the outline to the right to see how it compares to a measuring cup. My fist = \_\_\_\_ cup(s)

Healthy Tip:

Choose low-cost recipes and meals. Recipes with fewer ingredients are often cheaper and quick to make. One place to look for recipes is **www.diabetesfoodhub.org**.

This fist = 1 cup PLACE YOUR FIST HERE TO COMPARE LIMIT

FATS: All fats are high in calories, so keep the portion size small (less than 1 tablespoon in most cases).

#### **EAT Often**

Oil-based salad dressing: vinaigrette, oil and vinegar

Oils: canola, olive, sunflower, peanut

Trans fat-free spreads

Avocado, olives, seeds, peanut or almond butter

#### Sometimes

Low-fat creamy salad dressing like light ranch

Oils: corn, soybean, safflower, sesame

Mayonnaise

Full-fat creamy salad dressing like ranch or blue cheese

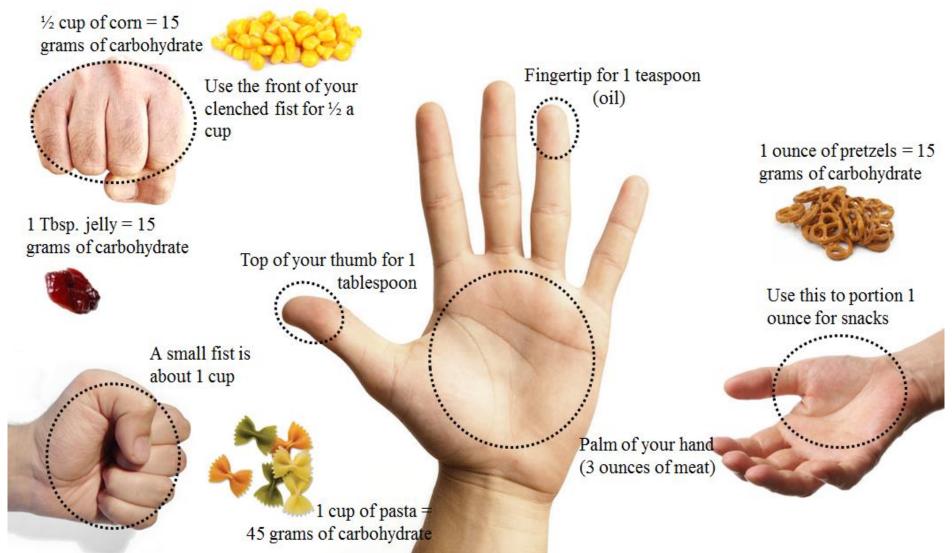
Butter, lard, coconut oil

Margarine

Cream

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# No food label or measuring cups?



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## Protect your eyes

- Wear sunglasses
- Wear protective eyewear
- Give your eyes a rest
- If you wear contacts, take steps to prevent eye infections

## Get answers to your questions



### **Past Recordings**

Dial 1-866-686-8240 to hear the latest recording

#### 2022 🕶

Ask the Experts: Getting Started- Organizing the Diabetes To Do List

Click for full archive and audio clip highlights

Ask the Experts: Make the Most of Your Health Care Visits

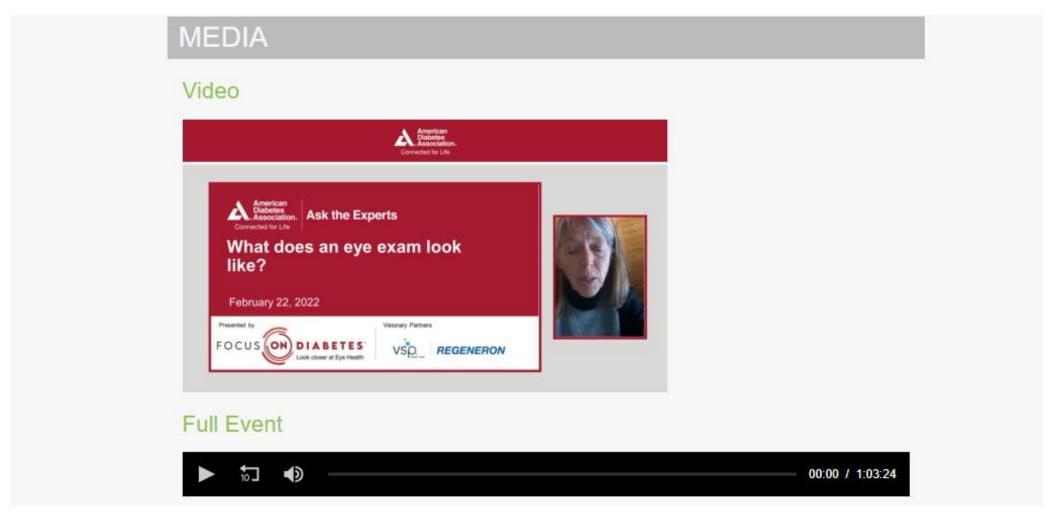
Click for full archive and audio clip highlights

Ask the Experts: Keeping your Heart Healthy-What to do

Click for full archive and audio clip highlights

Ask the Experts: What does an eye exam look like?

# Ask the Experts: What does an eye exam look like? February 22, 2022 @ 2:00 PM EST



# Living with Type 2 Diabetes Program Support to help you thrive

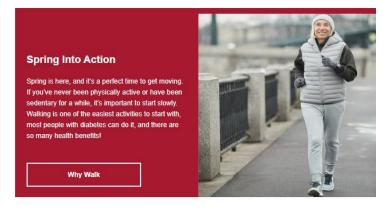
The Easiest Form of Exercise to Help Manage Your Diabetes Inbox ×

American Diabetes Association < reply@email.diabetes.org>
to me ▼

How walking can help your health, what to do about high blood pressure, and quick meal ideas.

American Diabetes Association.

Healthy Living for Life.





Managing High Blood Pressure with Diabetes

Two out of three people with diabetes report having high blood pressure or take prescription blood pressure

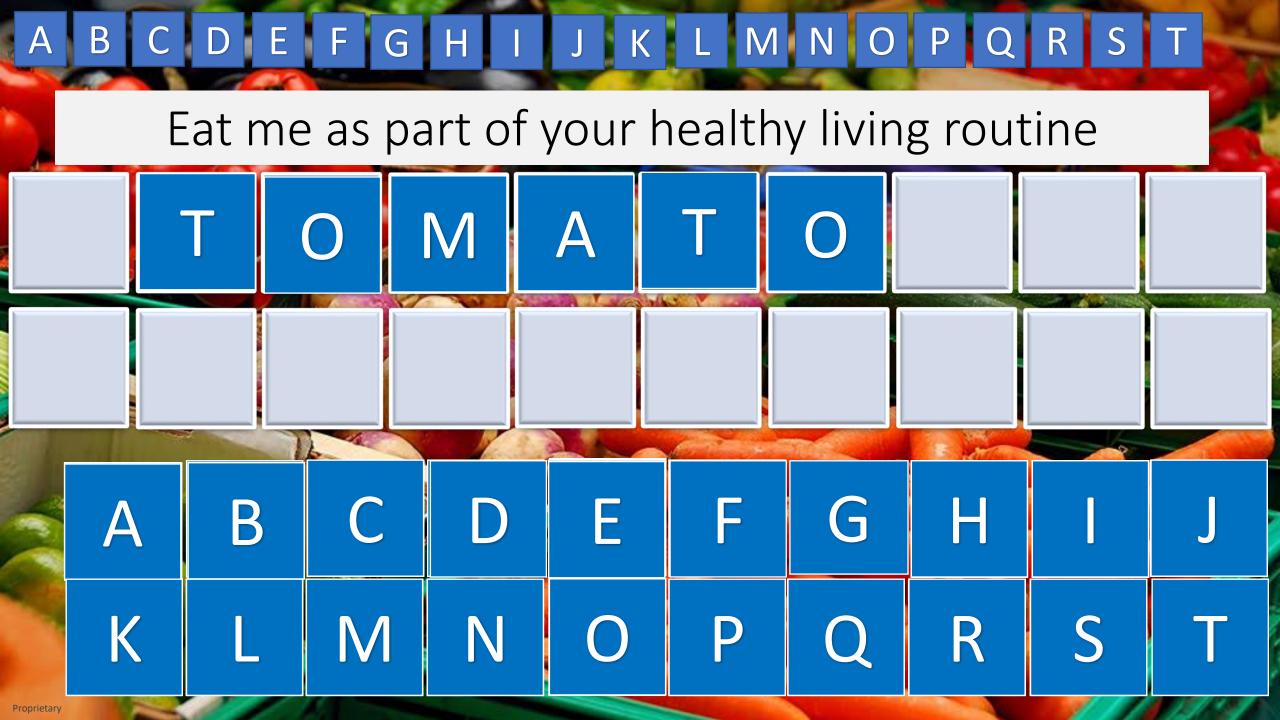
Enroll Today!

En Espanol

To sign up by phone, call 1-800-DIABETES (800-342-2383).

## Resources

- Eye Health | ADA (diabetes.org)
  - Risk Test | ADA (diabetes.org)
  - Diabetes and High Blood Pressure | ADA
  - ADA's Ask the Experts | Know Diabetes by Heart™
  - Recipes & Nutrition | ADA (diabetes.org)
  - Living With Type 2 Diabetes Program | ADA
  - What is the Diabetes Plate Method? (diabetesfoodhub.org)
- NACHW National Association of Community Health Workers
- <u>Exercise Can Slow or Prevent Vision Loss, Study Finds | National Eye Institute (nih.gov)</u>
- Healthy Vision | National Eye Institute (nih.gov)
- High Blood Pressure | American Heart Association
- Burden of Vision Loss | CDC
- National Diabetes Statistics Report | Diabetes | CDC



# Make Your Vision a Health Priority.

