

LIVING WITH DIABETES

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Objectives & Acknowledgements

- Be able to talk about what Diabetes Mellitus is
- Be able to articulate the difference between Diabetes Type I and Type II
- Understand the major organs affected by Diabetes Mellitus

Eyes (glaucoma & cataracts)

Nervous System changes - neuropathy

Circulatory Changes

Feet

Kidneys

Need to manage medication in collaboration with health care provider

[Information from the ADA and images from GoogleImages.com]

What is diabetes?

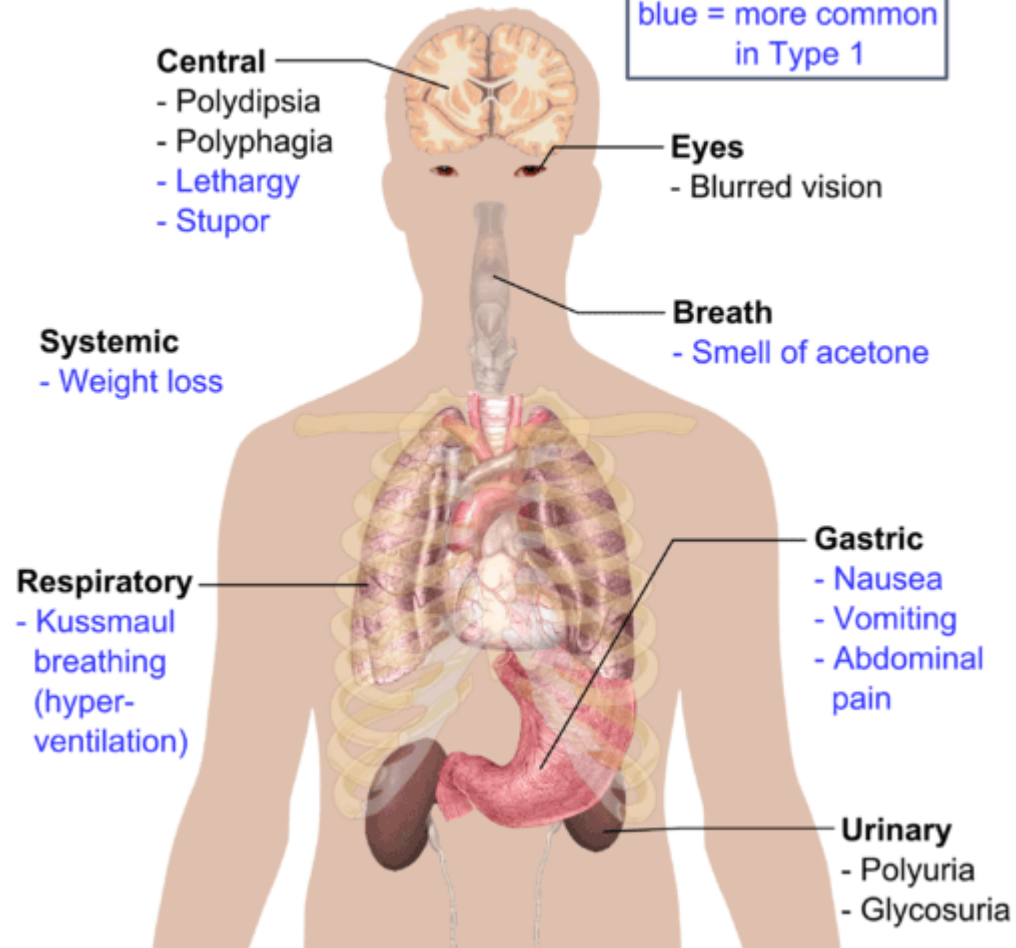
- A metabolic disorder
- When we eat, the food is converted to glucose – fuel
- The pancreas produces insulin to control the amount of glucose in our blood
- When there is not enough insulin, the amount of glucose in the blood is high
- This is called diabetes

- More than 37 million people in the United States have diabetes, and 1 in 5 of them don't know they have it.
- 96 million US adults—over a third—have prediabetes, and more than 8 in 10 of them don't know they have it.
- Diabetes is the 7th leading cause of death in the United States (and may be underreported).
- Type 2 diabetes accounts for approximately 90% to 95% of all diagnosed cases of diabetes; type 1 diabetes accounts for approximately 5-10%.

- \$327 billion total medical costs and lost work and wages for people with diagnosed diabetes.
- Risk of early death for adults with diabetes is 60% higher than for adults without diabetes.
- Medical costs for people with diabetes are more than twice as high as for people without diabetes.
- People who have diabetes are at higher risk of serious health complications:
 - blindness
 - kidney failure
 - heart disease
 - stroke
 - loss of toes, feet, or legs

Main symptoms of Diabetes

blue = more common
in Type 1



Types of Diabetes

- Type 2, there is not enough insulin, or the body does not react. About 90% of diabetics are Type 2
- Type 1, also called juvenile, affects children and young adults. There is no insulin produced
- Gestational, or pregnancy diabetes.

THE PROBLEM IS

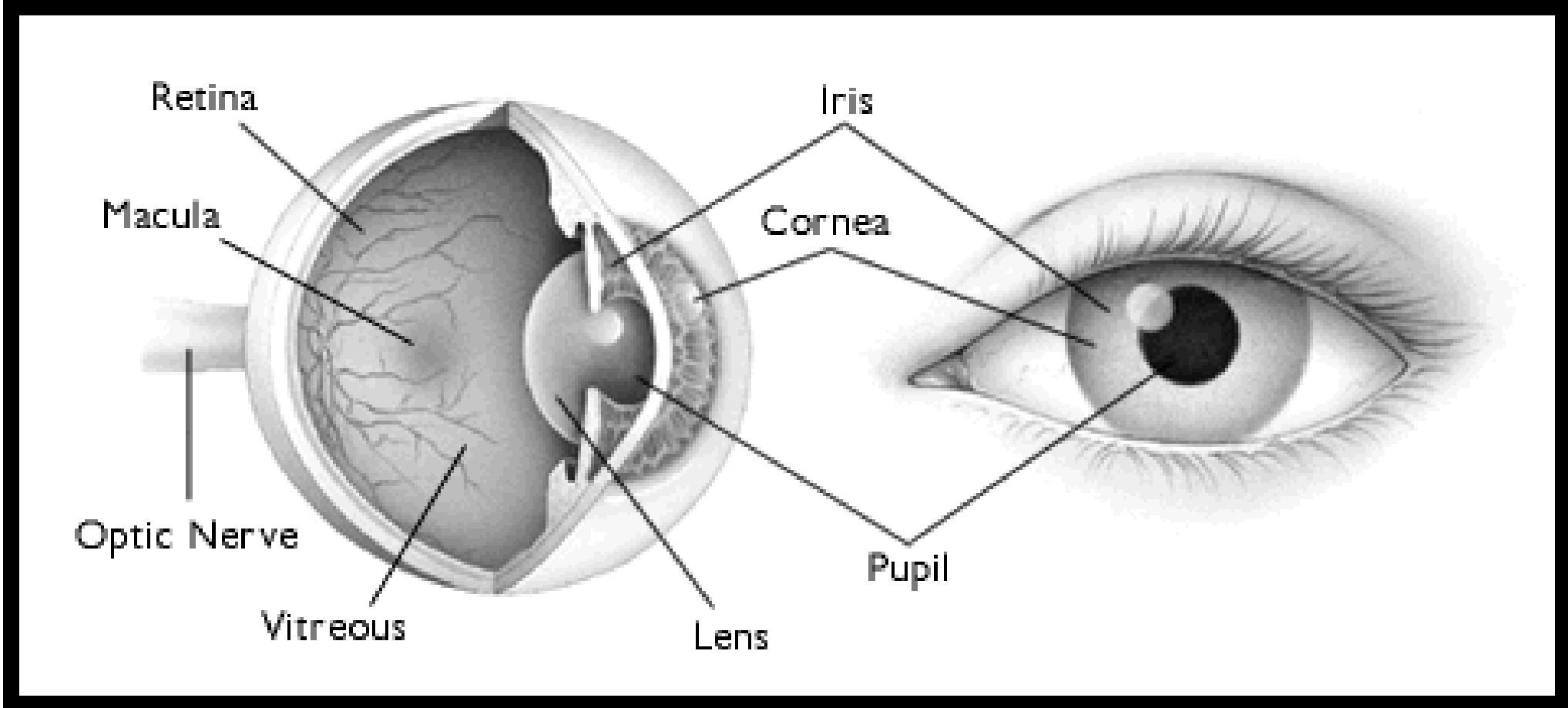
INCREASED RISK OF MANY HEALTH PROBLEMS –

Eyes

Nervous System

Circulatory System

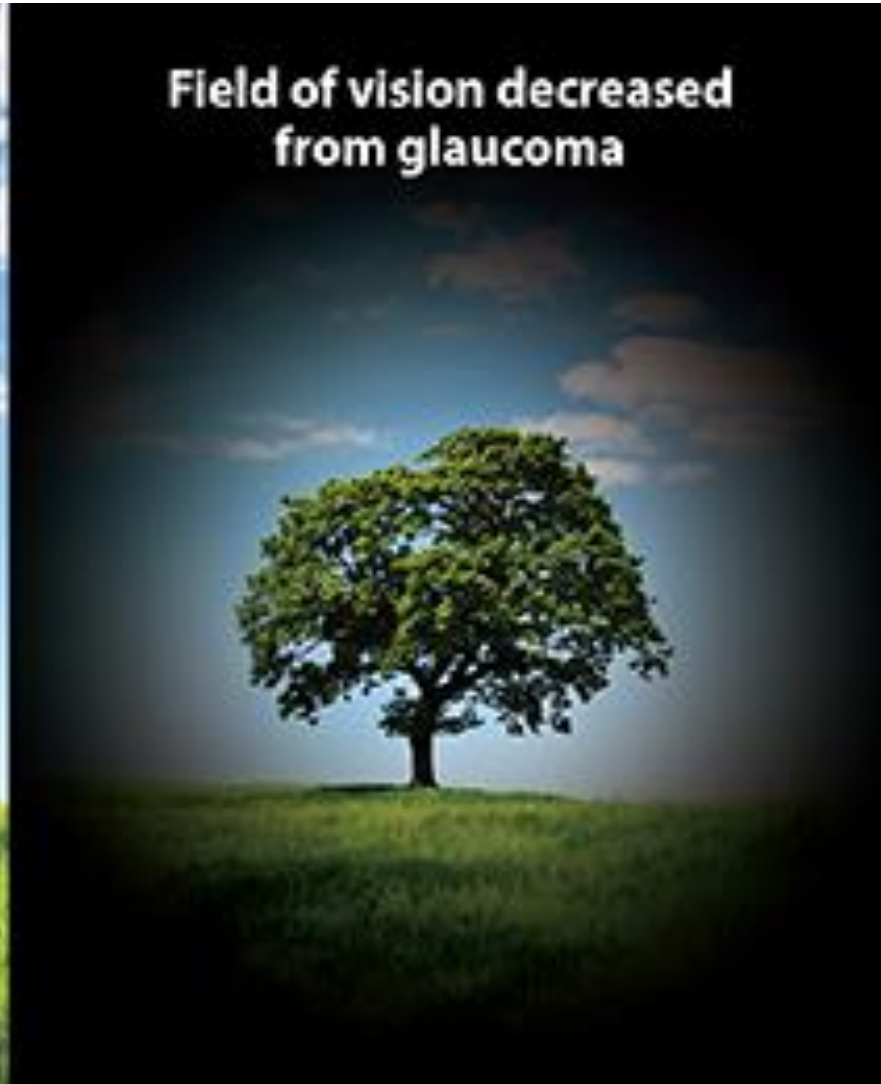
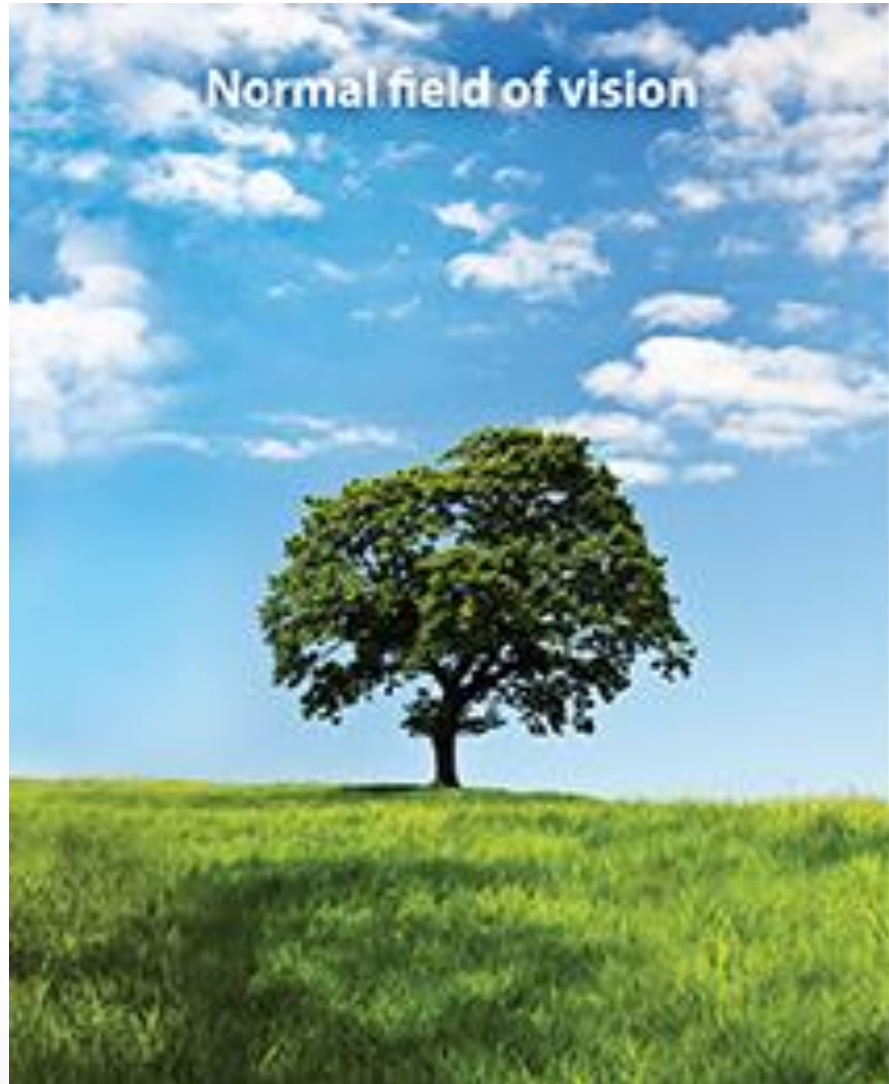
Kidneys



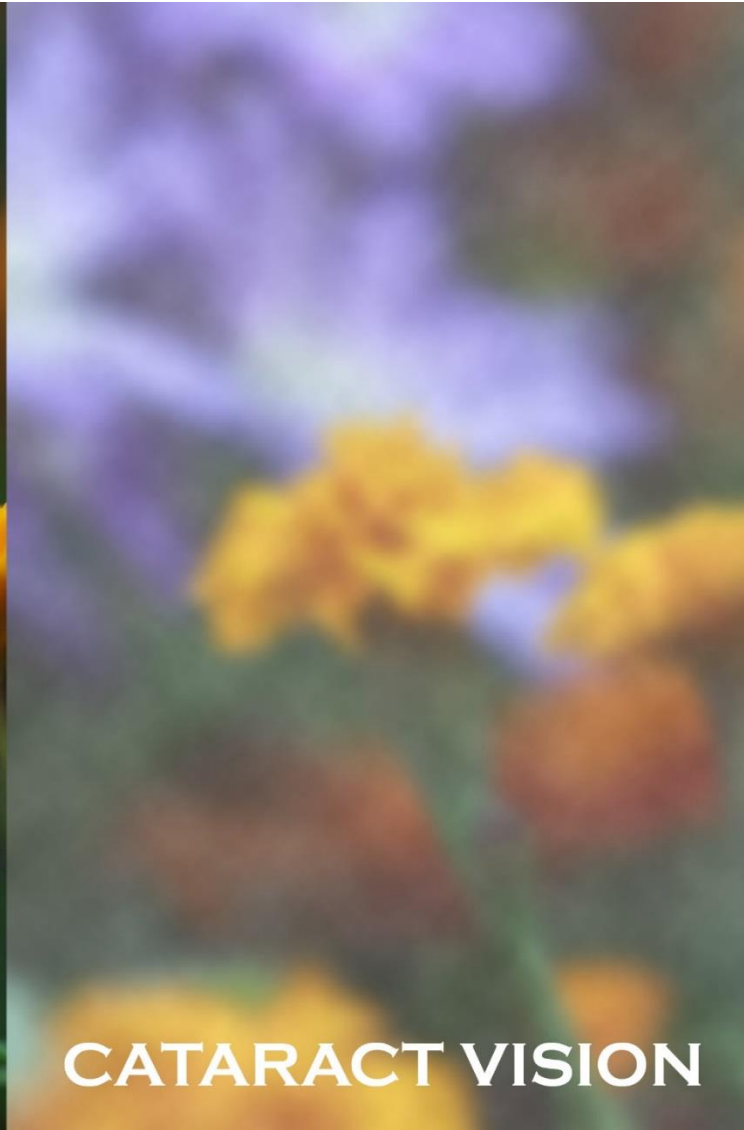
Vision problems

- Glaucoma
- Cataracts

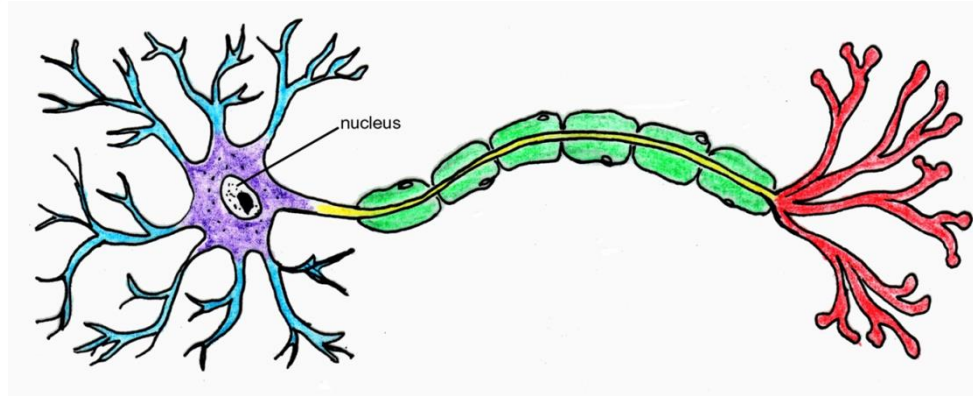
Glaucoma



CATARACTS



NEUROPATHY



- Neuropathy is nerve damage
- About half of all diabetics will have neuropathy
- Peripheral will cause numbness and tingling in your hands and feet
- Other nerves in your body may be involved

Foot complications

- Ulcers occur most often on the ball of the foot
on the bottom of the big toe
- Skin changes – dry and cracked
- Calluses
- Poor circulation
- Fungus/infections

Common areas of Irritation/Ulcers - Diabetic Foot



HYPERTENSION – HIGH BLOOD PRESSURE

- 2 OUT OF 3 PEOPLE WITH DIABETES HAVE HIGH BLOOD PRESSURE
- YOUR HEART HAS TO WORK HARDER TO CIRCULATE YOUR BLOOD
- HIGHER RISK OF HEART DISEASE AND STROKE

KIDNEY DISEASE



You...
You DOIN' OKAY?
EH?
BUDDY?



ACKHAHEHK!



A handwritten signature in black ink, located at the bottom right of the cartoon illustration.

What can I do?

- Keep blood sugar levels at your target range
- Don't smoke – it further constricts blood vessels
- Good diabetic control –

Exercise

Diet

Medications

A1C TESTING = THE BIG PICTURE



	Fasting blood sugar level (mg/dl)	Hemoglobin A1C %
Normal	Less than 100	Less than 5.7
Pre-diabetes	100-125	5.7 to less than 6.5
Diabetes	126 and higher	6.5 and above

The A1C measures average glucose binded to hemoglobin over a three month period.

MEDICATIONS

- You may control your diabetes with diet and exercise
- Your doctor may prescribe pills or insulin injections
- Newer Medications (SGLT2 Inhibitors)

Canagliflozin (Invokana)

Dapagliflozin (Farxiga)

Empagliflozin (Jardiance)

GLP-1 Agonist such as Victoza and Trulicity are injections.

Oldies, but Goodies

- Metformin (Biguanides)
- Glipazide (Sulphonylureas)
- Insulin

MEDICATIONS

DPP-4 inhibitors slow the inactivation and degradation of GLP-1, a hormone involved in glucose removal from the gut. An example is Januvia.

Blood glucose testing

- An essential part of your plan

What can make my blood glucose rise?

- Too much food (e.g. a meal or snack with more carbohydrates than usual)
- Not being active
- Not enough insulin or oral diabetes medications
- Side effects from other medications (for example, steroids, anti-psychotic meds)
- Illness (your body releases hormones to fight the illness, and those hormones raise blood glucose levels)
- Stress (stress can produce hormones that raise blood glucose levels)
- Short- or long-term pain (injury, such as sunburn) (your body releases hormones that raise glucose levels)



WHAT CAN MAKE MY BLOOD SUGAR FALL?

- Not enough food (e.g. a meal or snack with fewer carbohydrates than usual, missing a meal or snack)
- Alcohol (especially on an empty stomach)
- Too much insulin or oral diabetes medications
- Side effects from other medications
- More physical activity or exercise than usual - physical activity makes your body more sensitive to insulin and can lower blood glucose.

YOUR CARE PROVIDERS – AT EVERY VISIT

Talk about your blood glucose meter readings. Take your meter with you.

- Check your blood pressure.
- Check your weight and talk about ways to reach a reasonable weight.
- Talk about what you eat.
- Discuss any lifestyle, work, or emotional changes.
- Discuss your physical activity.
- If you smoke, talk about ways to quit.
- Remove shoes and socks for a foot check.
- Talk about all medicines including over-the-counter pills, herbs, vitamins, or supplements.
- Ask if you should take aspirin to prevent a heart attack.
- Ask any questions

YOUR CARE PROVIDERS --3 to 6 months

- Check your A1C – the most effective way to prevent diabetic problems

	Fasting blood sugar level (mg/dl)	Hemoglobin A1C %
Normal	Less than 100	Less than 5.7
Pre-diabetes	100-125	5.7 to less than 6.5
Diabetes	126 and higher	6.5 and above

YOUR CARE PROVIDERS - ANNUALLY

- Check your cholesterol to see your risk for heart and blood vessel disease
- Have a dilated eye exam to check for eye problems
- Get a flu shot
- Have a complete foot exam

Help for caregivers

- Educate yourself
- Make a plan – together
- Take time for yourself
- Set small goals
- Encourage self care
- Find support for yourself

WHAT'S THE FUTURE?

- Genetic research
- Reducing cardiovascular disease
- New medications
- Pancreatic research
- Ozempic, Wegovy, Mounjaro (glucagon-like peptide-1 (GLP-1))

DIABETES – DEATH SENTENCE OR OPPORTUNITY?

That's up to **YOU**

Planning together with:

- your health care providers
- your care givers.

THANK YOU!

QUESTIONS????