



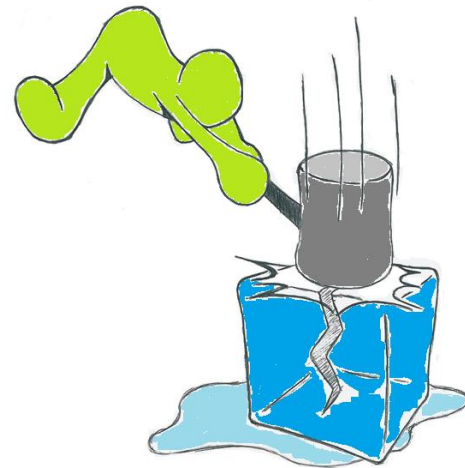
Impact of Diabetes in Washington State Understanding Diabetes Management and Prevention

Heart, Disease, Stroke, and Diabetes Prevention
Program, Community Based Prevention Section



Introductions

- Name
- What you would like to accomplish today?



Objectives

- Understand and describe basic information about diabetes and prediabetes
- Understand and describe diabetes and prediabetes screening methods
- Learn how to address diabetes as a Community Health Worker
 - Prediabetes risk test
 - Diabetes Prevention Program
 - Diabetes Self-Management Education
 - Problem solving & goal setting

A word cloud centered around the theme of diabetes. The most prominent words are 'prediabetes', 'insulin', 'glucose', and 'diabetes'. Other significant words include 'sugar', 'hypoglycemia', 'hyperglycemia', 'obesity', 'youth', 'metabolism', 'complications', 'acute', 'endocrine', 'medication', 'ketoacidosis', 'healthcare', 'inject', 'sensitivity', 'gestational', 'chronic', 'pancreas', 'symptoms', 'type', 'weight', 'monitor', 'resistance', and 'nerve'. The words are arranged in various orientations and sizes, with 'prediabetes' and 'insulin' being the largest and most central.

Activity # 1



- Fold the paper inward following the lines.
- Write a sentence about diabetes, fold it, and pass it to the person sitting on your right
- Read the sentence and draw a picture that represents the sentence and fold it
- The next person will write a sentence from the image they have in front of them

Things we may hear



- Diabetes is caused by eating too much sugar
- People with type 2 diabetes who need to use insulin are in serious trouble
- An ultra low carb diet is the best for people with diabetes
- The main problem with prediabetes and diabetes is blood glucose
- Prediabetes isn't serious

True or false?

- If you are overweight or obese, you will get type 2 diabetes.

True or false?

- If you are overweight or obese, you will get type 2 diabetes.

FALSE

Most overweight people never develop type 2 diabetes, and many people with type 2 diabetes are at a normal weight or only somewhat overweight.

True or false?

- Eating too much sugar causes diabetes.

True or false?

- Eating too much sugar causes diabetes.

FALSE

While a diet high in sugar may put someone at a higher risk for type 2 diabetes, it is not the only factor. Type 1 diabetes is caused by genetics and other unknown causes.

True or false?

- If you have type 2 diabetes and you need to start using insulin, it means you're not taking care of yourself.

True or false?

- If you have type 2 diabetes and you need to start using insulin, it means you're not taking care of yourself.

FALSE

Type 2 diabetes is often a progressive disease. As time goes on, lifestyle change and oral medicine may not be enough to keep blood sugar levels in range.

Key Words

- **A1C**

A test that measures a person's average blood glucose level over the past 2 to 3 months. Also known as hemoglobin A1C

- **Beta Cell**

Cell in charge of making insulin. Beta cells are located in islets of Langerhans which are in part located in the pancreas

- **Insulin**

Hormone responsible for regulating glucose (sugar) levels

- **Glucose**

Main source of energy for metabolic processes

Key Words

- **Hyperglycemia**

High glucose levels in the blood stream that could lead to health complications

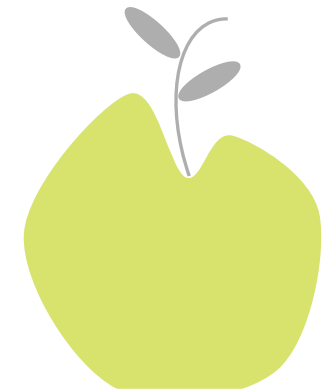
- **Hypoglycemia**

Low glucose levels in the blood stream that could lead to health complications

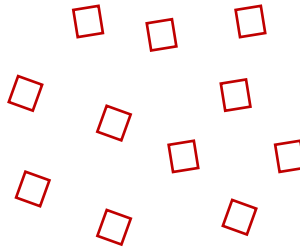
- **Self-Management**

In diabetes, the ongoing process of managing diabetes (Includes meal planning, planned physical activity, blood glucose monitoring, taking diabetes medication, handling episodes of illness and of low and high blood glucose, managing diabetes when traveling, etc.)

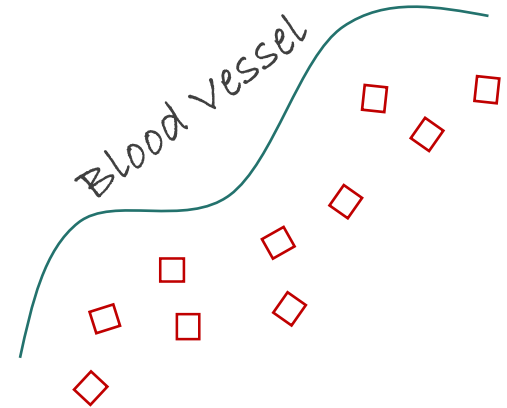
What happens in Digestion?



Carbohydrate



Glucose



Blood Vessel

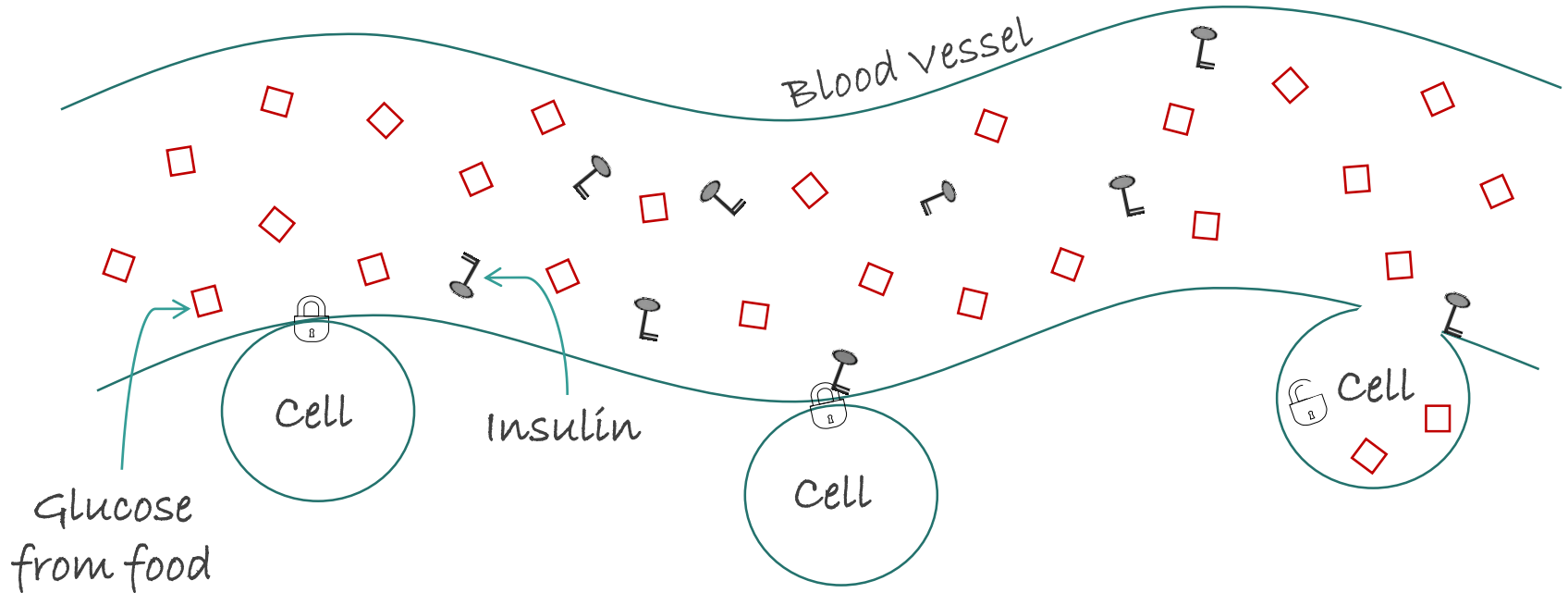
Carbohydrate gets eaten and broken down into glucose

Glucose enters the blood stream

What happens after?



Normal Process:



As glucose levels increase, insulin goes up

Insulin attaches to cell

Insulin opens cell and glucose gets used as energy

What is prediabetes?



- Glucose levels are elevated, but not high enough to diagnose Diabetes
- If not controlled, this can lead to Type 2 Diabetes
- 11 out of 12 people do not know they have Prediabetes

Prediabetes puts you at risk!

What is diabetes?



- Chronic condition where the body is unable to regulate blood *glucose* levels
- Three different types of diabetes:
 - **Type 1:** Body produces little to no *insulin*
 - **Type 2:** Body does not make enough *insulin* or does not use it properly
 - **Gestational Diabetes:** Women may develop it during pregnancy

GLUCOSE:

Sugar converted into energy by the cells

INSULIN:

Hormone that helps glucose into the cell

What is diabetes?



- **Type 1:** Body produces little to no insulin
 - **Immune-Mediated Diabetes**
 - Previously known as insulin dependent diabetes or juvenile-onset diabetes.
 - Cellular mediated autoimmune destruction of the pancreatic beta cells.
 - **Idiopathic Type 1 Diabetes**
 - Cause is unknown.
 - Have inadequate insulin secretion but have no evidence of beta cell autoimmunity

GLUCOSE:

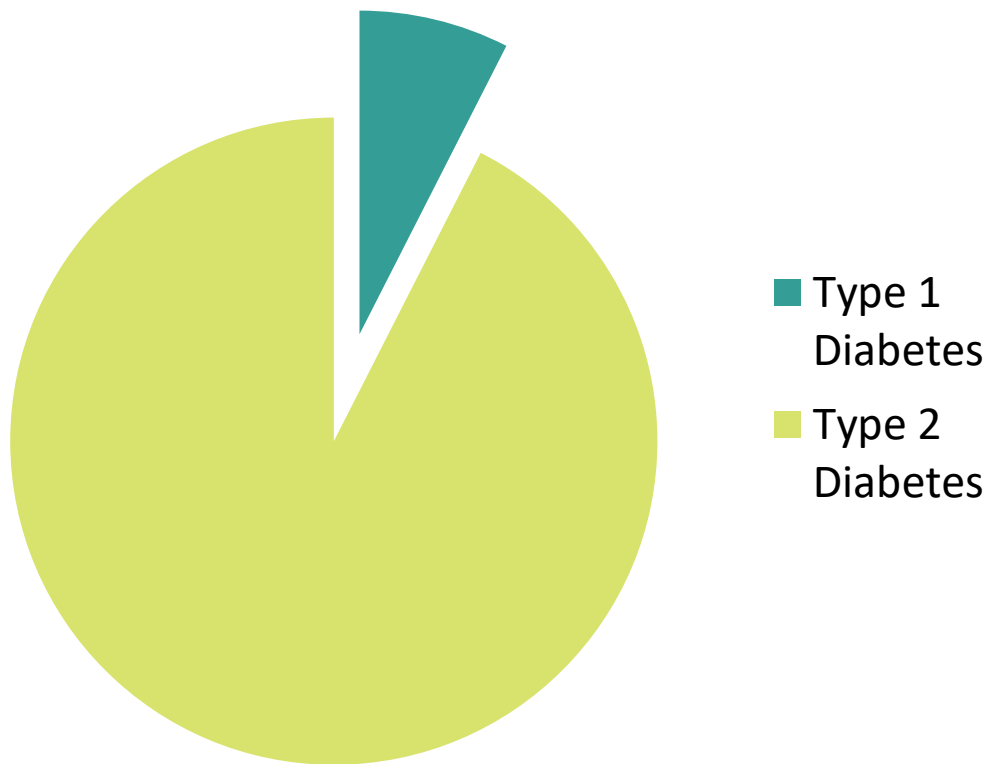
Sugar converted into energy by the cells

INSULIN:

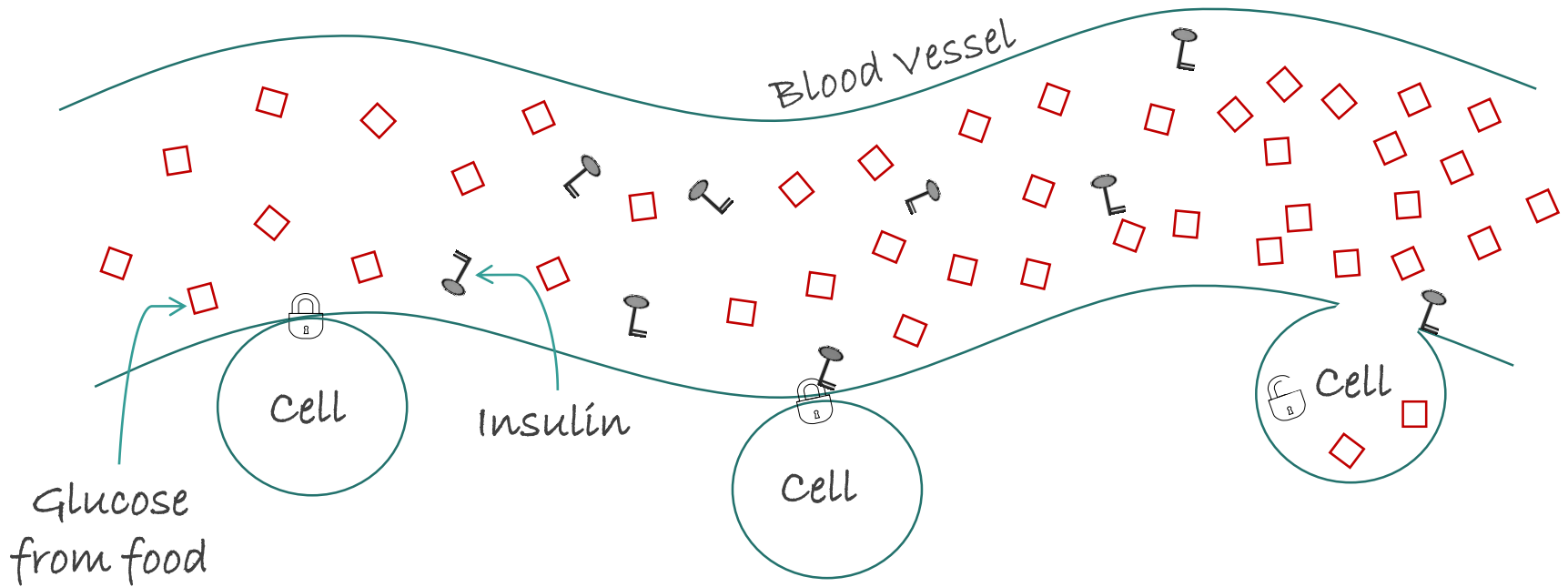
Hormone that helps glucose into the cell

What percentage of people have which type?

Percent of people with diabetes by type



Prediabetes

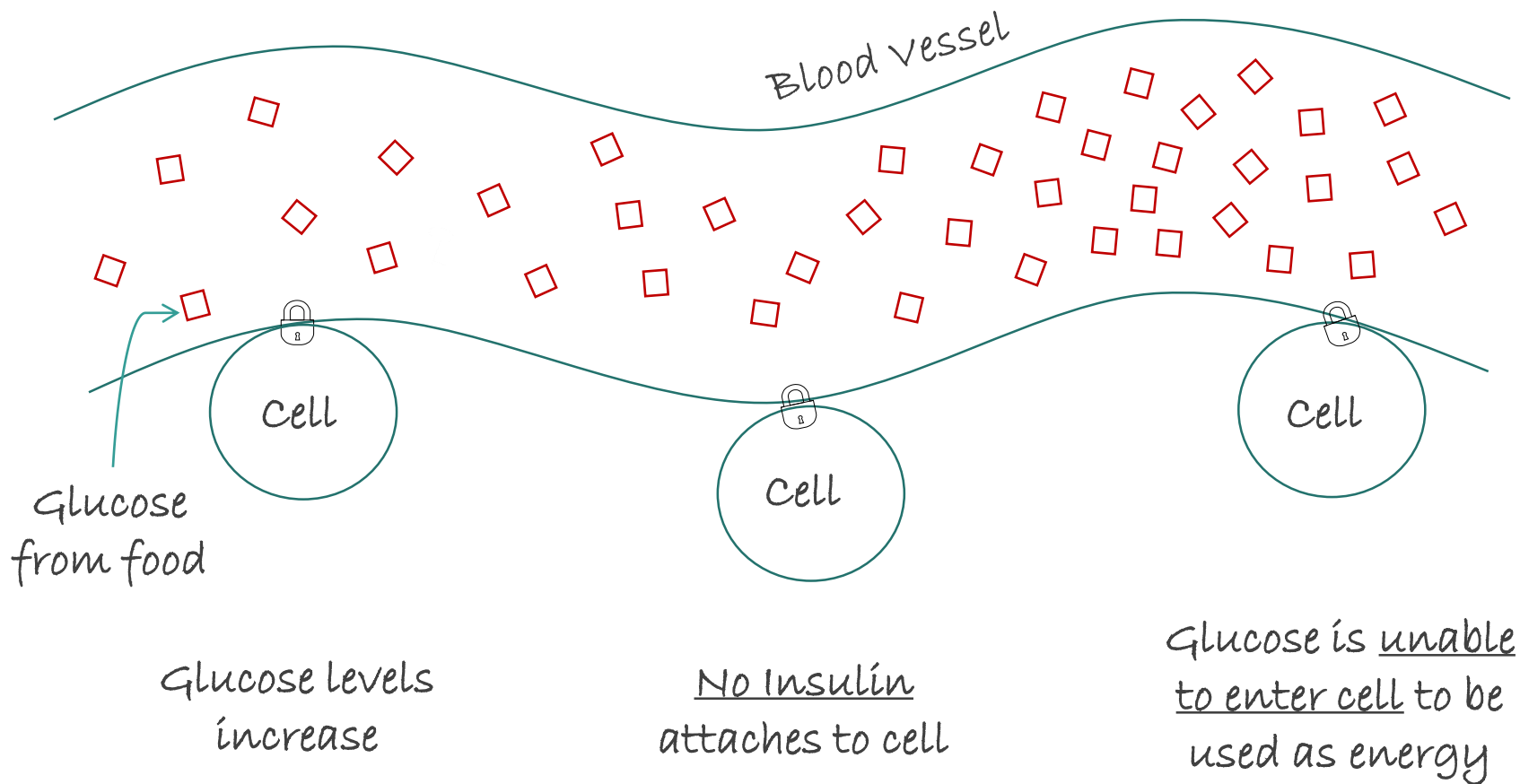


As glucose levels increase, insulin goes up

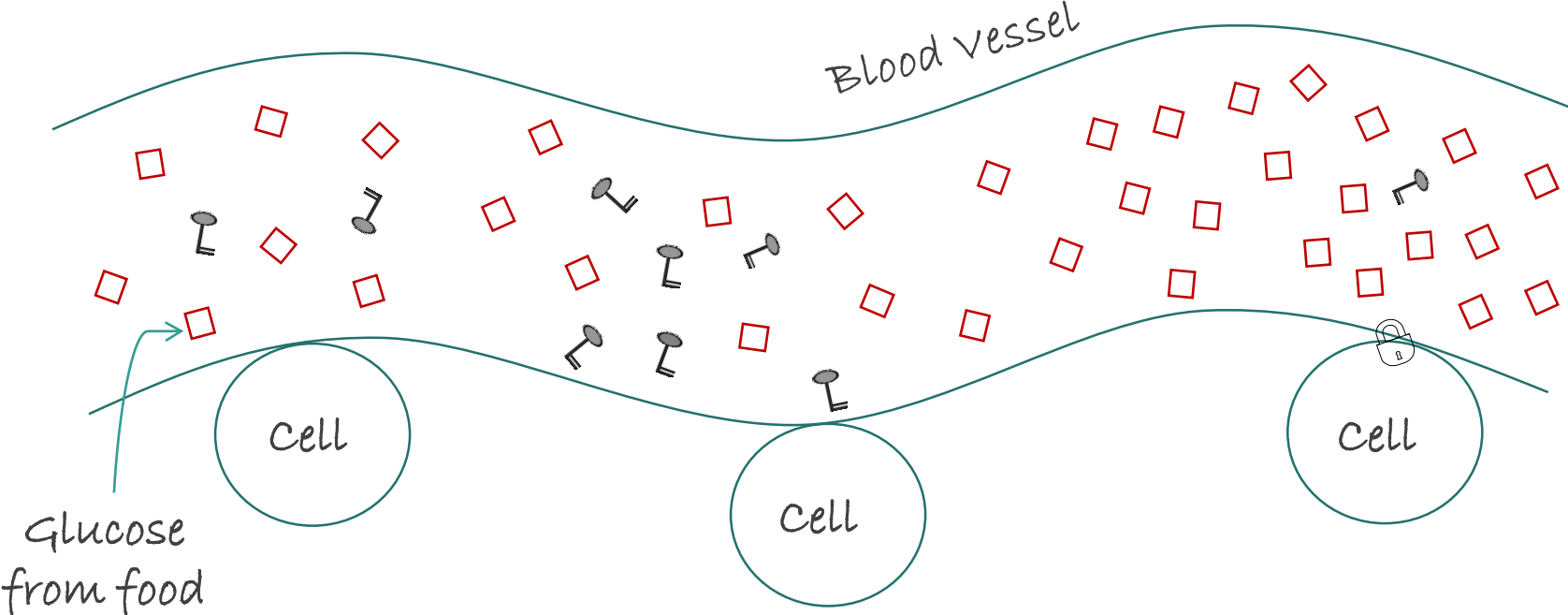
Insulin attaches to cell

Insulin opens cell and glucose gets used as energy

Type 1 Diabetes



Type 2 Diabetes

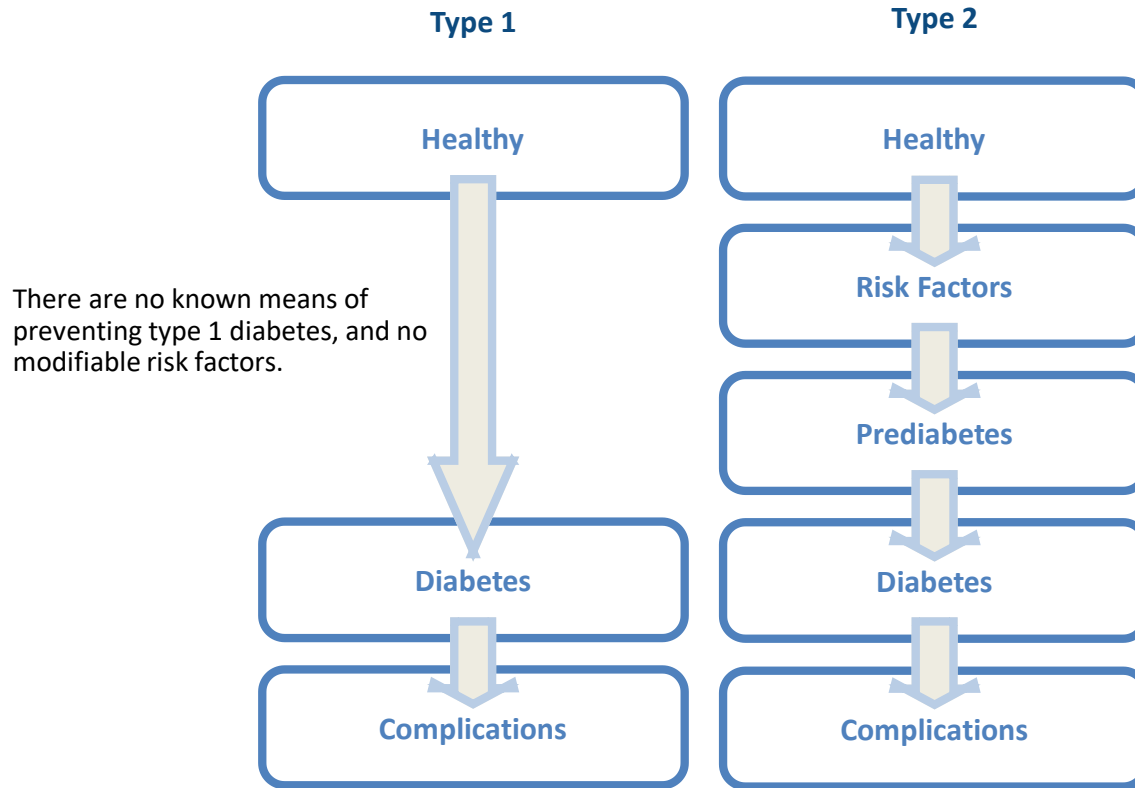


Glucose levels increase

Insulin Resistance

Not enough insulin to keep up with demand

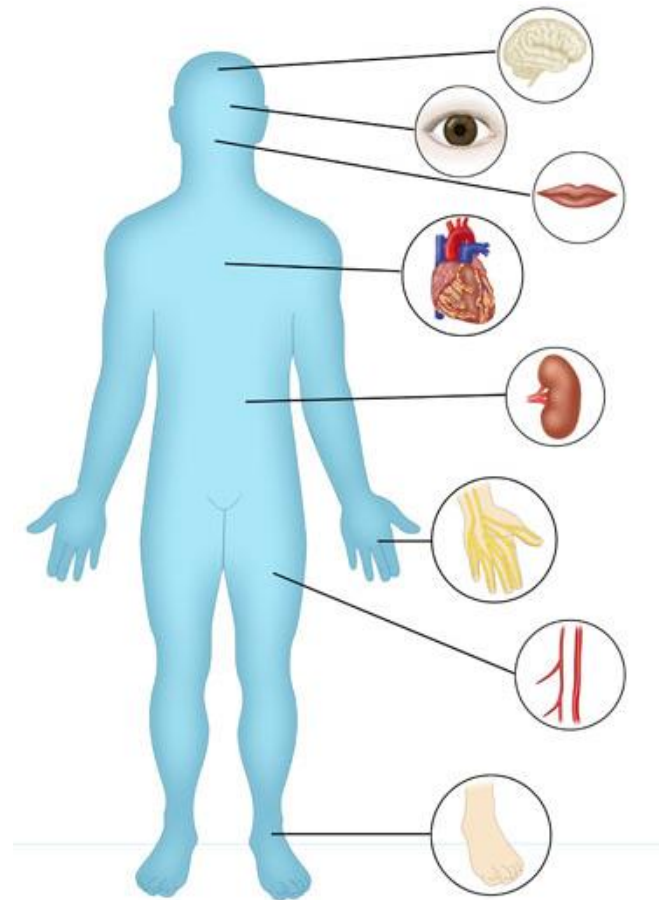
The Progression of Diabetes



At every step, preventive treatment, including healthy eating and active living, can stop the further progression of diabetes.

Diabetes Can Affect.....

Diabetes can affect many different organs in our body increasing the chance for many serious health problems



Diabetes & Prediabetes in the United States

DIABETES

30.3
MILLION

30.3 million
people have
diabetes



That's about 1 out of every 10 people



1
OUT
OF
4

don't know
they have
diabetes

PREDIABETES

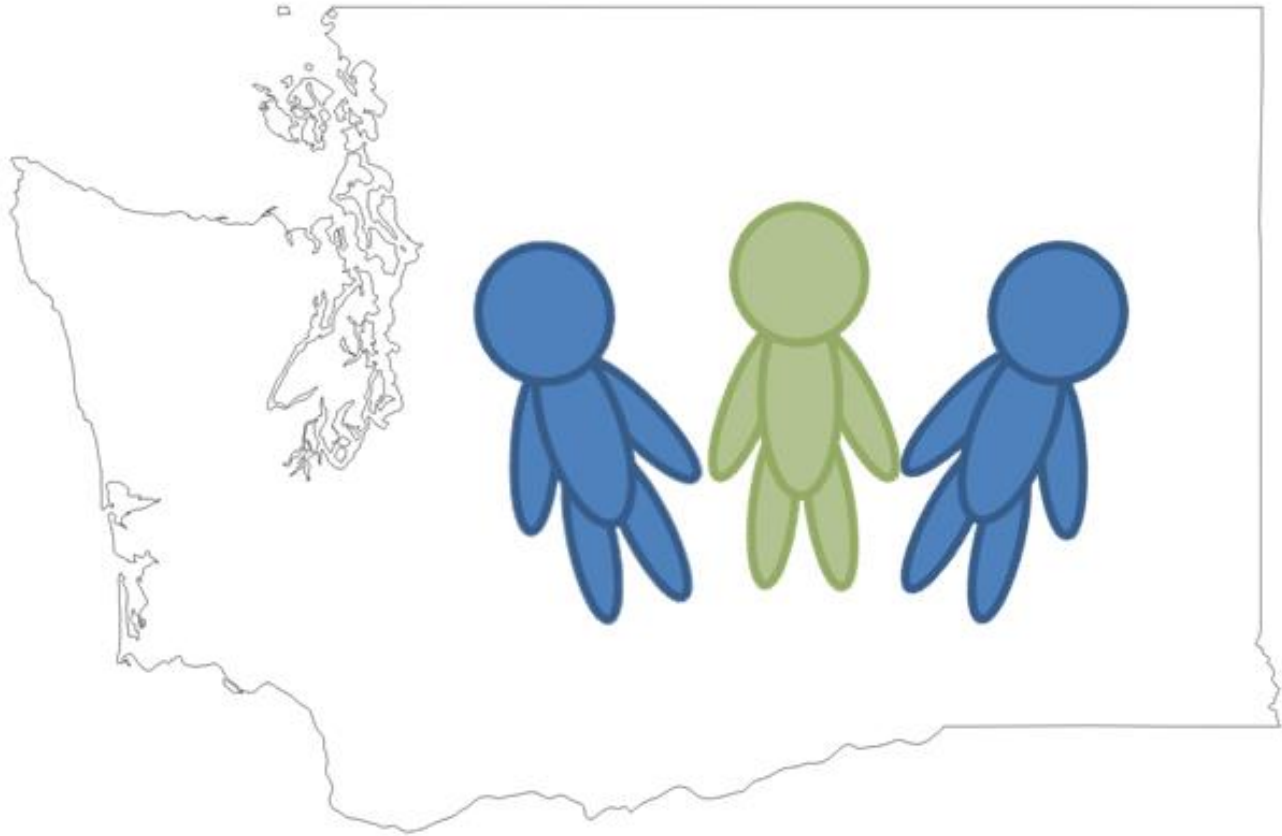
84.1 MILLION
adults have
prediabetes



9
OUT
OF
10

people with prediabetes
don't know they have it

Prediabetes in Washington

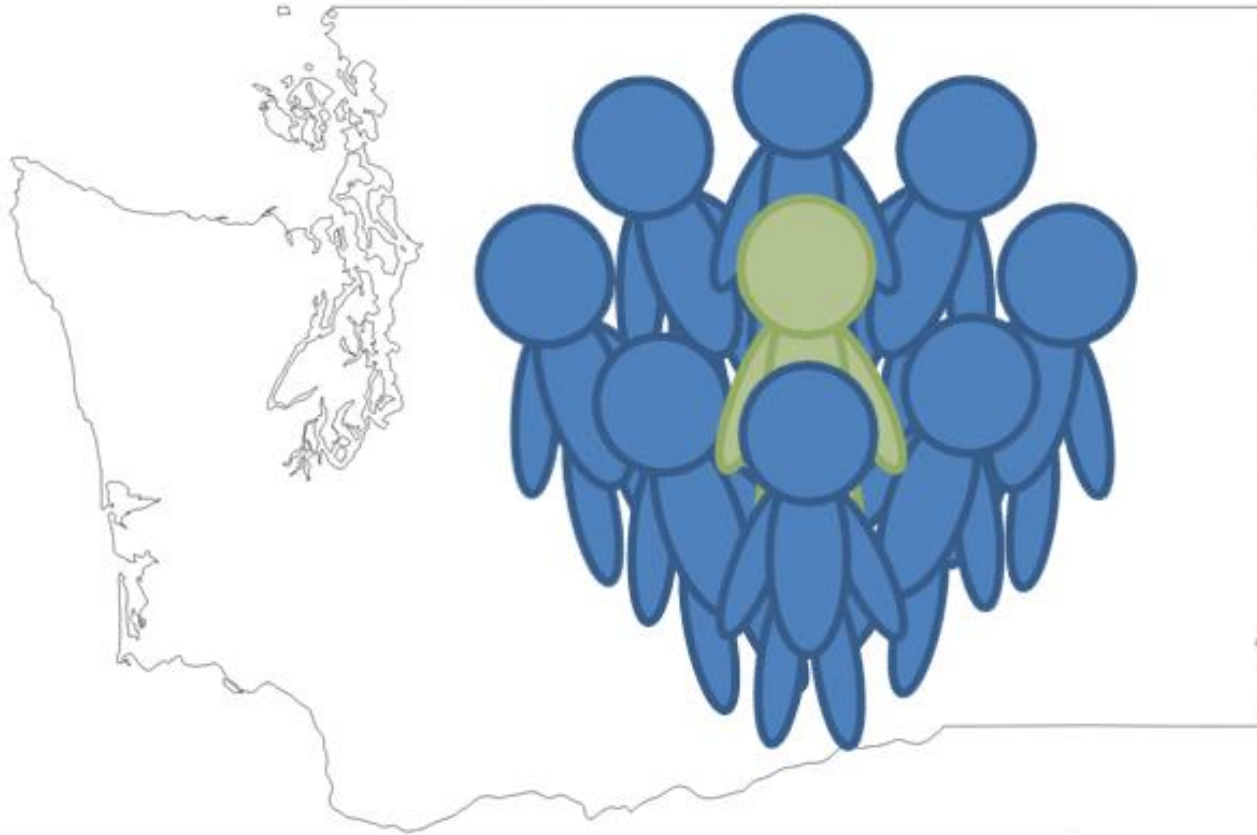


2 million

Adults in
Washington have
prediabetes

That is about **1**
out of **3** people

Diabetes in Washington

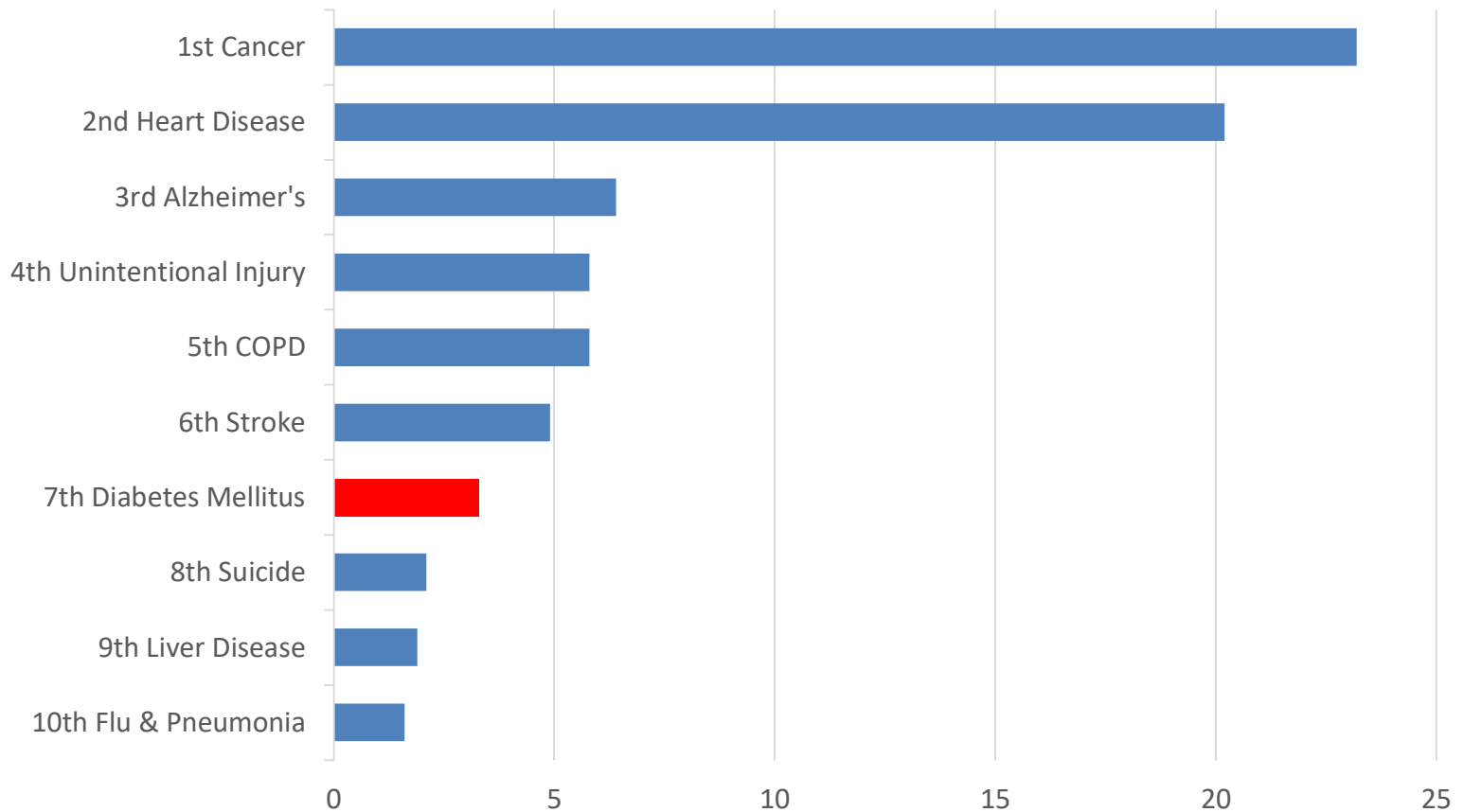


686,000

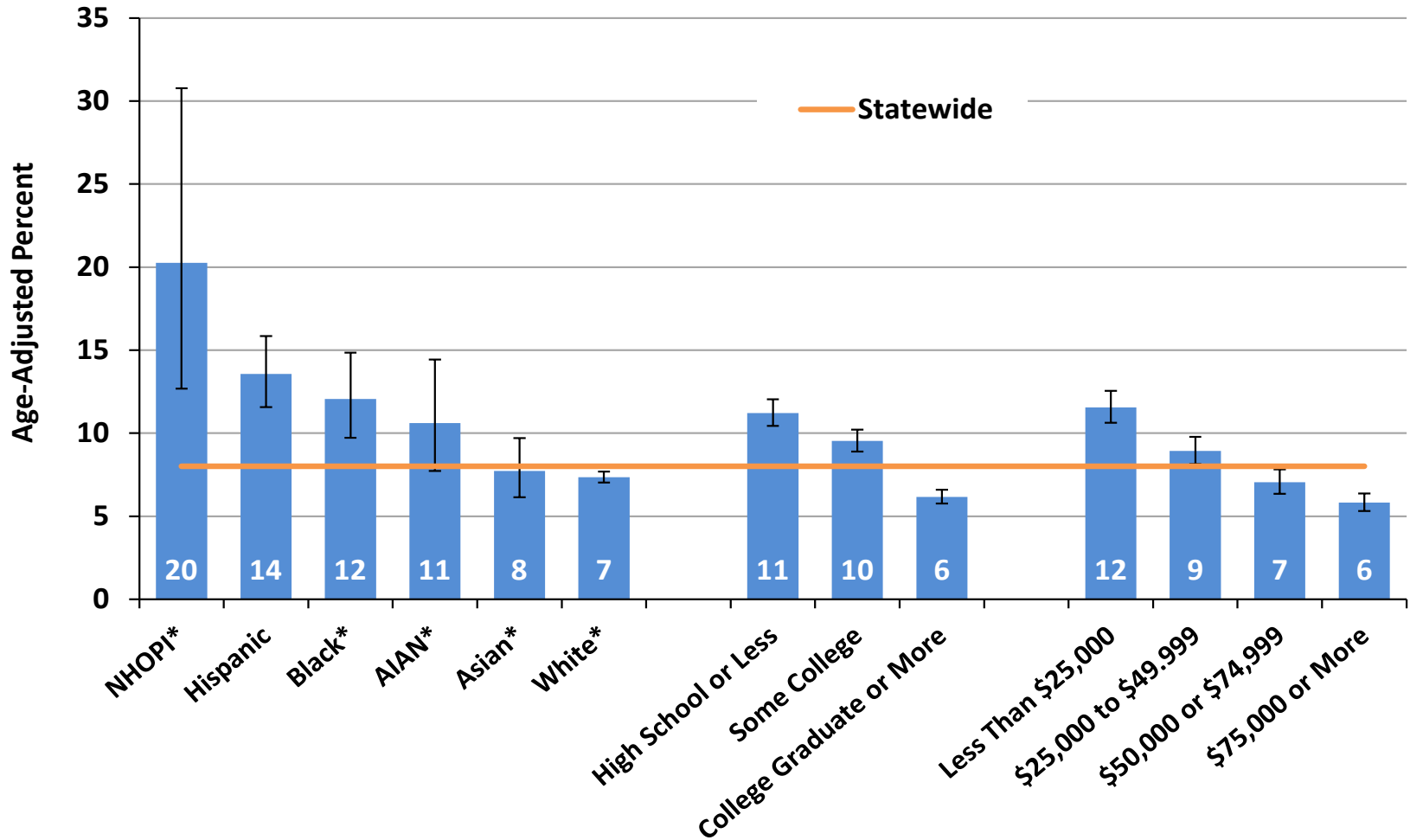
People in
Washington have
diabetes

*That is about **1** out
of **11** people*

2015 Washington State 10 Leading Causes of Death



Differences in Diabetes Burden



Risk Factors for Type 2 Diabetes

● **Non Modifiable**

- Age
- Ethnicity
- Gender
- Family History
- History of Gestational Diabetes
- Polycystic Ovary

(but there are things that can be done to manage them)

● **Modifiable**

- Weight gain
- Tobacco use
- High blood pressure
- High cholesterol
- Sedentary lifestyle
- Overweight or obesity

Additional Risk Factors for Diabetes

● ***Socially Determined***

- Lower education
- Lower socioeconomic status
- Psychosocial stressors

● ***Other Conditions***

- Cardiovascular disease
- Acanthosis nigricans

● ***Associated***

- Presence of damaging immune system cells
- Chronic glucocorticoid Exposure
- Antipsychotic therapy for schizophrenia and/or severe bipolar disease

Testing Methods



Blood Test Values

Test	Normal	Prediabetes	Type 2 Diabetes
Hemoglobin A1C	<5.7	5.7 – 6.4	≥6.5
Fasting Plasma Glucose Levels	70-99	100-125	≥126
2-h Oral Glucose Tolerance Test	<140	140 – 199	≥200

If result is positive, a second test is needed to confirm diagnosis

Hemoglobin A1C:

- Average glucose level of the last 2 to 3 months

Fasting Plasma Glucose:

- Glucose level after 8 hour fasting period

Oral Glucose Tolerance Test (OGTT):

- Two readings; One fasting and one 2 hours after glucose drink is taken

Testing for Type 1 Diabetes

Patients with type 1 diabetes often present with acute symptoms of diabetes and very high glucose levels.

- Several studies indicate that measuring islet autoantibodies in relatives of those with type 1 diabetes may identify individuals who are at risk for developing type 1 diabetes.
- Persistence of two or more autoantibodies predicts clinical diabetes.

Managing Diabetes

Possible treatments include:

- ✓ Healthy Eating, Active Living
- ✓ Medication
 - ✓ Oral
 - ✓ Injectable (Insulin)
- ✓ Blood glucose testing

ANYONE with diabetes should routinely see their health care provider to monitor their diabetes and help them learn to self manage their diabetes

Health care providers who specialize in diabetes care include:

Primary Care Providers

Endocrinologists

Ophthalmologists

Podiatrists

Dietitians

Diabetes Educators

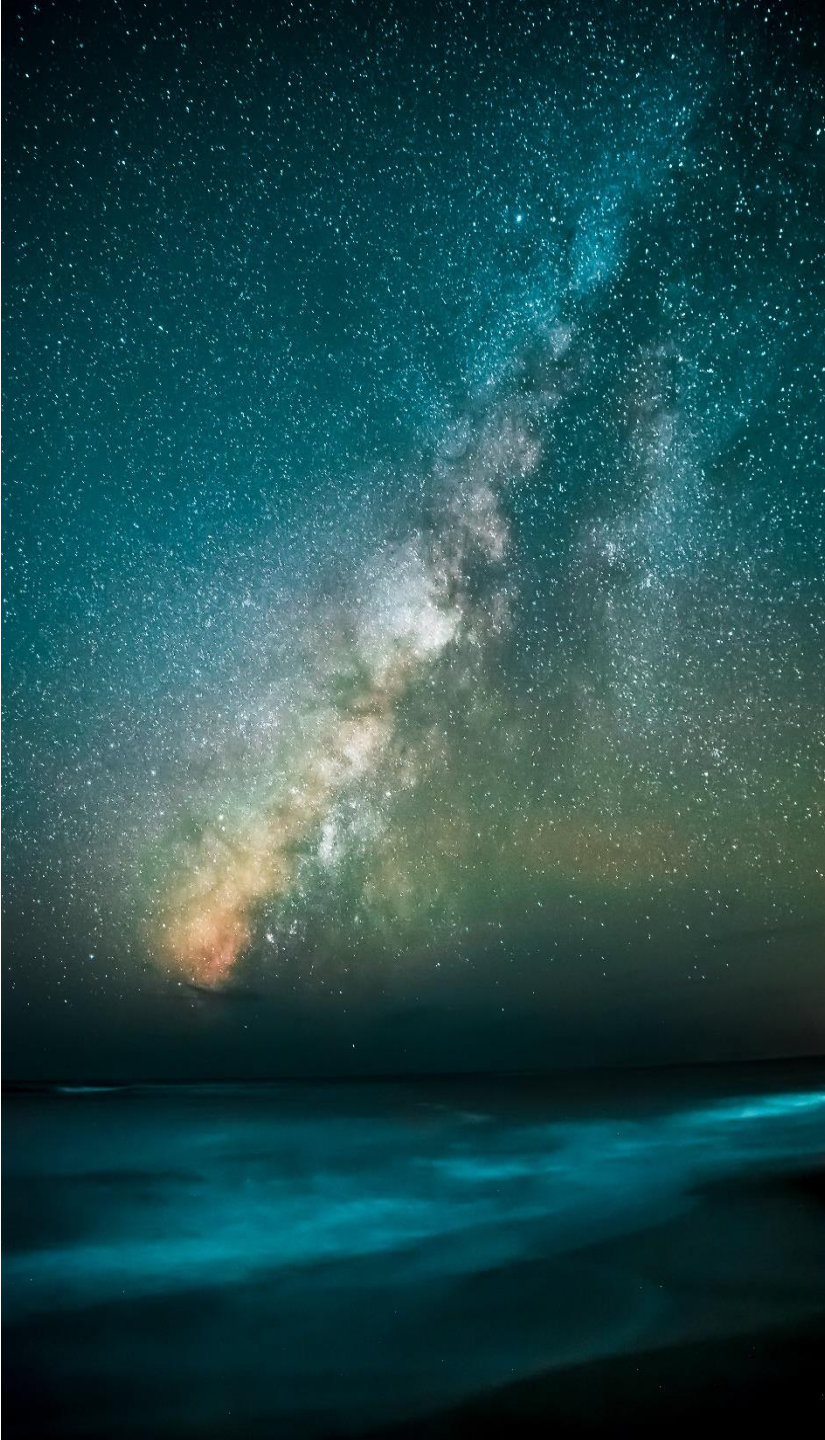
Diabetes Treatment and Self-Management

- Clinical management
 - <.02% of a patient's life!
 - Tests, labs, exams
- Patient self-management
 - 98.98% of a patient's life
 - Blood glucose testing, nutrition, physical activity, taking meds, coping etc
 - Hugely determines diabetes outcome
 - Impacts quality of life
 - We as health professionals can help people gain efficacy and confidence in diabetes self-management



Community Health Worker Support





7 Self-Care Behaviors

AADE

- Healthy eating
- Being active
- Monitoring
- Taking medication
- Problem solving
- Healthy coping
- Reducing risks

Healthy eating

- Eating a variety of nutrients
- Understand food labels
- Develop an eating plan



Active Living

- Think of things you like to do
- Keep track of your activity
- Mix it up



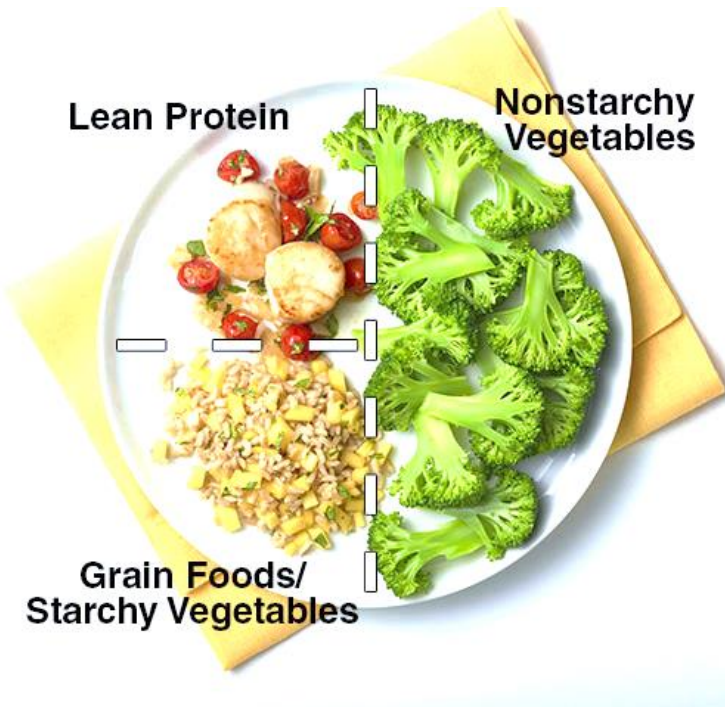
Healthy Eating



- Meals based on:
 - Lean proteins
 - Non-starchy vegetables
 - Whole grains
 - Healthy fats
 - Fruit
- Most food should be:
 - Low in fat
 - Low to moderate in salt and sugar

CHWs Supporting Management

Plate method



Physical Activity Types

1. Aerobic Exercise

- ✓ Also known as cardio
- ✓ Helps your heart and bones get stronger
- ✓ Recommended 30 minutes a day



2. Strength Training

- ✓ Also known as resistance training
- ✓ Helps maintain and build strong muscles
- ✓ Use of free weights, resistance bands or your own body weight



Physical Activity



- Aerobic exercise: 30 minutes 5x per week
- Strength training: Twice per week
- Stretching: As often as possible
- Balance exercises: 3 or more days per week



Monitoring

- Check glucose levels regularly
- Follow a monitoring schedule
- Monitor health status
 - A1C
 - Cardiovascular health
 - Kidney
 - Eye
 - foot

Monitoring Diabetes

Blood glucose targets are individualized based on:

- duration of diabetes
- age/life expectancy
- comorbid conditions
- known CVD or advanced microvascular complications
- hypoglycemia unawareness
- individual patient considerations

Self Monitoring of Blood Glucose (SMBG)

patients on multiple insulin injections or pumps should perform self-monitoring of blood glucose (SMBG) prior to meals and snacks, at bedtime and occasionally postprandial, prior to exercise, when low blood glucose is suspected, after treating low blood glucose until they are normal, and prior to critical task (driving)

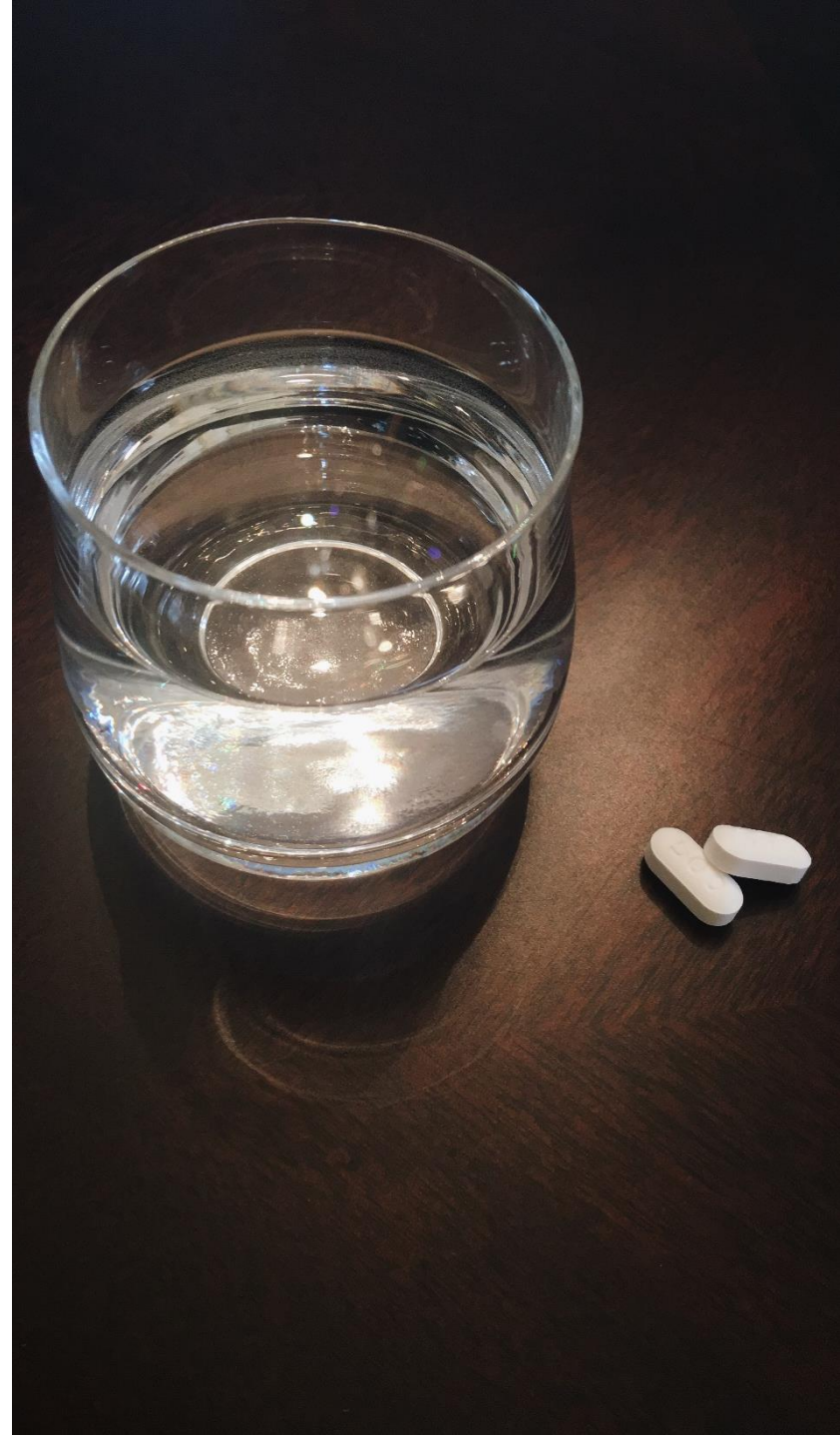
ADA SMBG Targets

- Fasting 80-130 mg/dl
- Peak postprandial 1- 2 hours < 180
- Individualize

Source: American Diabetes Association, 2016

Taking Medication

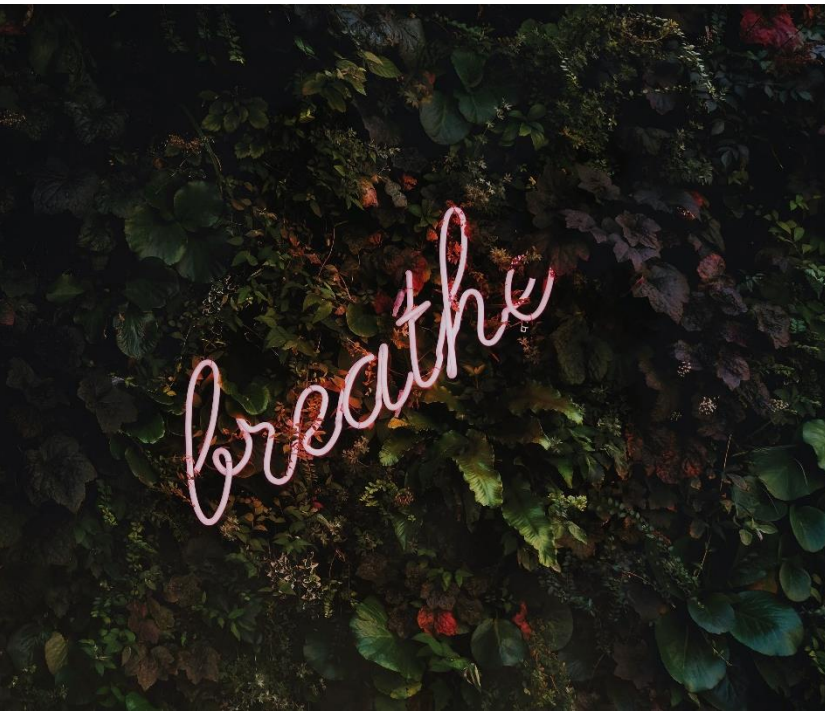
- Increase taking medications on time
- Ask:
 - Why I am taking these medications?
 - What will they do for me?
 - How should I fit them into my schedule?
 - Will they cause side effects?
 - If so, What should I do?
- Take medications as prescribed





Reducing Risks

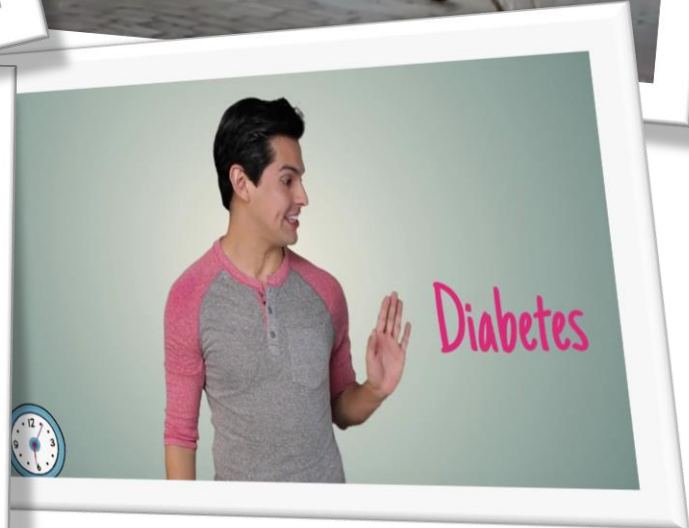
- Understand the risks can help you take steps to lower your chance of developing diabetes or diabetes related complications



Healthy Coping

- There are stressors that can affect you physically and emotionally. The important thing is to recognize them and take steps to reduce the negative impact

Awareness

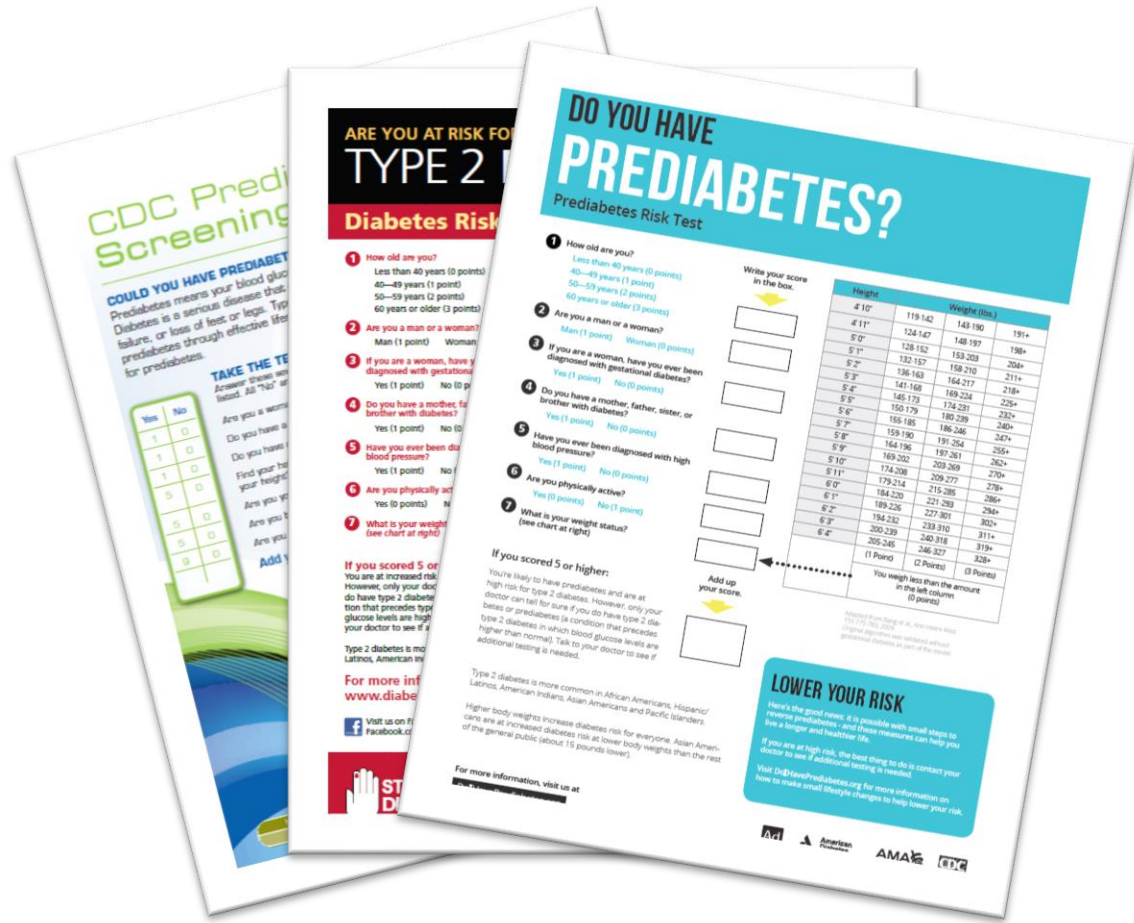


Awareness Campaigns



CHWs Supporting Prevention

- Encourage **prediabetes screening** by sharing these questionnaires with your community



CHWs Supporting Self-Management

Encourage participation in DPP and DSME programs

Diabetes Prevention Program (DPP)

The screenshot shows the CDC National Diabetes Prevention Program website. At the top left is the CDC logo with the text "Centers for Disease Control and Prevention" and "CDC 24/7: Saving Lives, Protecting People™". To the right is a search bar. Below the header is a dark green navigation bar with "National Diabetes Prevention Program" and a "CDC A-Z INDEX" dropdown. Social media icons for Facebook, Twitter, and a plus sign are visible. The main content area features a large banner with the text "PREVENT TYPE 2 DIABETES CUT RISK IN HALF", "PROVEN LIFESTYLE CHANGE PROGRAM", "NATIONAL PARTNERSHIP COMMUNITY-BASED", and "NEW CURRICULUM PREVENT 2". Below the banner is a "GENERAL INFORMATION" section with six cards:

- 1. About Prediabetes & Type 2 Diabetes:** Prediabetes is a serious condition affecting 1 out of 3 American adults—that's 86 million people!
- 2. Research-Based Prevention Program:** A CDC-recognized lifestyle change program is a proven way to prevent or delay type 2 diabetes.
- 3. Lifestyle Change Program Details:** Learn what to expect when joining a CDC-recognized lifestyle change program to prevent type 2 diabetes.
- 4. Testimonials from Participants:** Hear from real people who benefited from a CDC-recognized lifestyle change program.
- 5. Find a Program:** Find a CDC-recognized lifestyle change program near you or join one of the online programs!
- 6. What Is the National DPP?:** Learn about this national partnership to prevent or delay type 2 diabetes in the United States.

Diabetes Self-Management Education (DSME)

The screenshot shows the SMRC Diabetes Self-Management Education website. At the top left is the SMRC logo with the text "Self-Management Resource Center". To the right are links for "Find a Workshop", "Portal Login", and "Con". Below the header is a dark red navigation bar with "News", "About", "Programs", "Licensing", "Training", and "Resources". The main content area features a large banner with the text "Help Your Community Take Charge of its Health" and an image of a woman hiking. Below the banner is a paragraph: "Millions of adults live with one or more chronic health conditions. Our programs help people and their caregivers manage their symptoms, improve their quality of life, and reduce healthcare costs." Below the paragraph is a "LEARN MORE" button. At the bottom of the page is a dark blue footer with the text "The evidence-based self management programs previously offered by Stanford Patient Education Research Center now at the Self-Management Resource Center" and a "SEE OUR FREQUENTLY ASKED QUESTIONS" button.

CHWs Supporting Self-Management

Program locators (and visits to healthcare providers!) can help guide community members to local Diabetes Prevention Programs (DPP) and Diabetes Self Management Education (DSME)

Center for Disease Control and Prevention

WIN 2-1-1

The screenshot shows the 'Diabetes > National Diabetes Prevention Program' page. It features a navigation menu on the left with options like 'HOME: National Diabetes Prevention Program', '1. About Prediabetes & Type 2 Diabetes', '2. Research-Based Prevention Program', '3. Lifestyle Change Program Details', '4. Testimonials from Participants', and '5. Find a Program'. The main content area is titled 'Find a Program Near You' and includes social media icons for Facebook, Twitter, and a plus sign. Below this, there is a search instruction: 'With hundreds of publicly available lifestyle change programs across the United States, odds are there's one in your community. Find a program near you, or join an online program!'. A secondary instruction says: 'Click on your state or the Online or Combination In-Person/Online Programs link. Contact programs directly for details about dates, times, and costs.' The main heading is 'Diabetes Prevention Recognition Program - Find a Program Near You'. It provides instructions: 'Find a program near you by selecting your state or territory. Or, find an online or combination in-person/online program by selecting that link to the right. Some online providers may also have an in-person program. Please contact the organization for in-person program locations.' There is a dropdown menu for 'Location' with the text '- Select from list -' and a 'GO' button. A link for 'Export Full Program List' is also present. A map of the United States is shown with Washington state highlighted. A 'REGISTRY OF RECOGNIZED ORGANIZATIONS' button is visible.

The screenshot shows the Washington State Department of Health website. The header includes the '2-1-1' logo, 'Washington Information Network 211', and navigation links for 'Popular Topics', 'My Favorites', 'Contact Us', and 'Chat With Us'. The main heading is 'Focus On Health' with the tagline 'Get health care and wellness resources.' Below this is a search bar with a dropdown for 'My County' set to 'Statewide' and a search icon. The page is divided into three main sections: 'TOPICS', 'News', and 'Helpful Links'. The 'TOPICS' section lists: 'Health Education Programs', 'AIDS/HIV Prevention Counseling', 'Chronic Disease Self-Management', 'Diabetes Education', 'Diabetes Prevention', 'Diabetes Screening', 'Disease and Disability Information', 'First Aid Instruction', 'General Health Education Programs', 'Nutritional Education', 'Physical Activity and Fitness Education', 'Sexuality and Reproductive Health Education', 'Smoking Cessation', and 'Wellness and Lifestyle Programs'. The 'News' section features an article titled 'Apply for Health Insurance' with a sub-heading 'Need to sign up for health insurance? Washington residents are now able to use the website <http://wahealthplanfinder.org/> to compare and enroll in health insurance programs. This site can help you shop for health insurance anonymously, find out if you are eligible for financial help, compare plans side-by-side, and select a plan for coverage.' It also mentions a 'statewide Toll-Free Customer Support Center' and provides contact information for WAFINDER. The 'Helpful Links' section includes 'Living Well' and 'WSDA Outreach Program'.

Lecturing vs motivating



- Lecturing: delivering information to the patient about how to change

- Motivating: eliciting information from the patient about their motivations to change

Motivational Interviewing



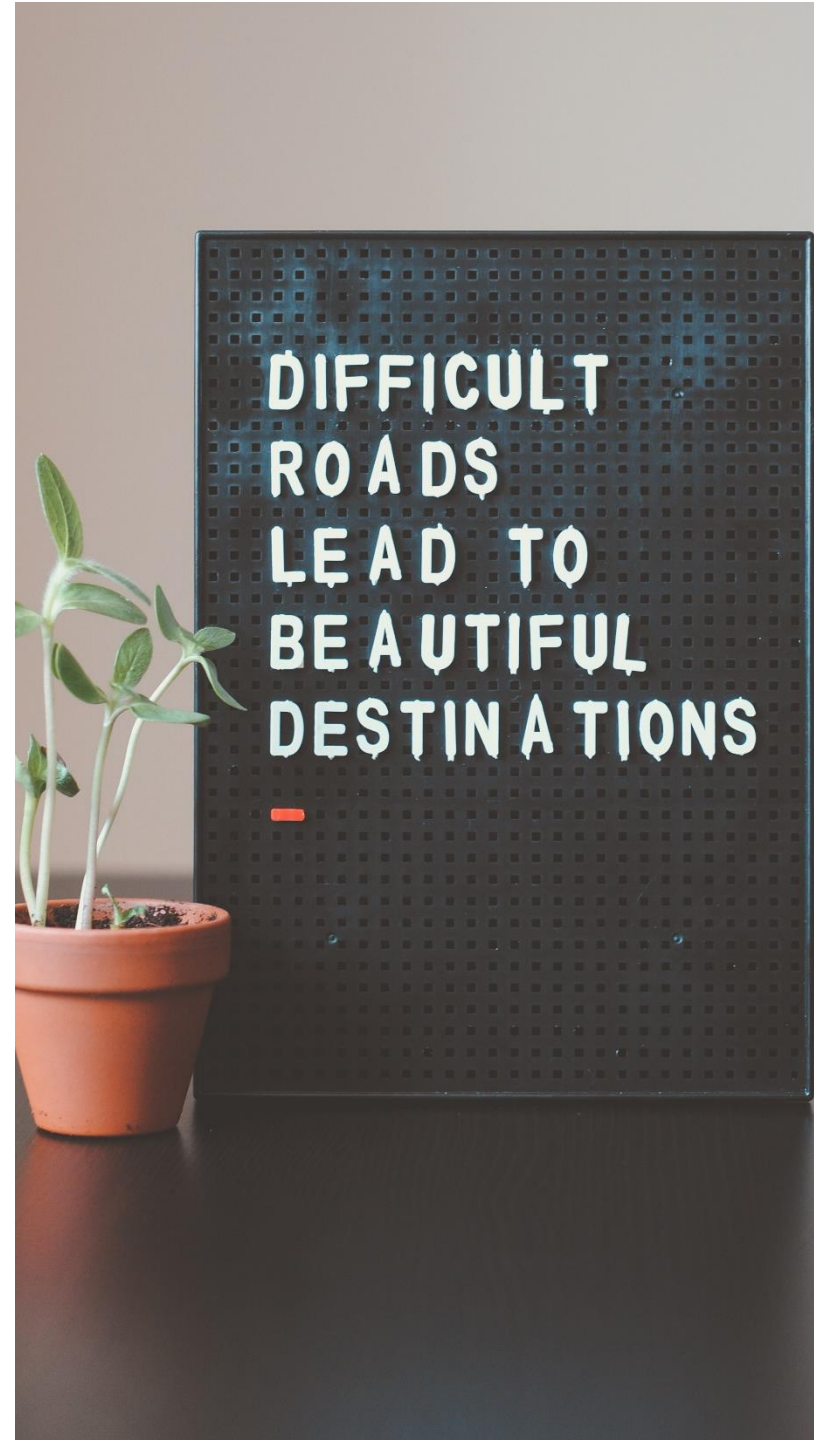
● Five Basic Motivational Interviewing Skills:

- Open-Ended Questions
- Reflective Listening
- Elicit Self-Motivational Statements
- Affirm
- Summary Statements

Motivational Interviewing

Five Basic Motivational Interviewing Skills:

- Open-Ended Questions
- Reflective Listening
- Elicit Self-Motivational Statements
- Affirm
- Summary Statements





Goal Setting

- Chronic Disease Self-Management Program
Self-Management Resource Center
- 1. Something you want or decide to do
- 2. Achievable
- 3. Action specific
- 4. Answer the following questions
 - *What?*
 - *How much?*
 - *When?*
 - *How often?*
- 5. Confidence Level

ADA Ambassadors Initiative

- Support people with diabetes in their communities by connecting people with education and resources from the ADA
- Serve as a bridge between their communities and the ADA by communicating local needs and gaps to the ADA to inform our work
- For more information about the ADA Ambassador Training contact Kelsey Stefanik-Guizlo at kstefanikguizlo@diabetes.org

In Summary...

- Community Health Workers are a trusted member of their community and can help prevent diabetes and complications by:
 - Educating the community about diabetes
 - Encouraging community members to get screened for prediabetes and diabetes
 - Share resources about diabetes management and prevention

Thank you!

Questions?

Contact Information

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