

Best Diabetes Care for People with Developmental Disabilities Workshop

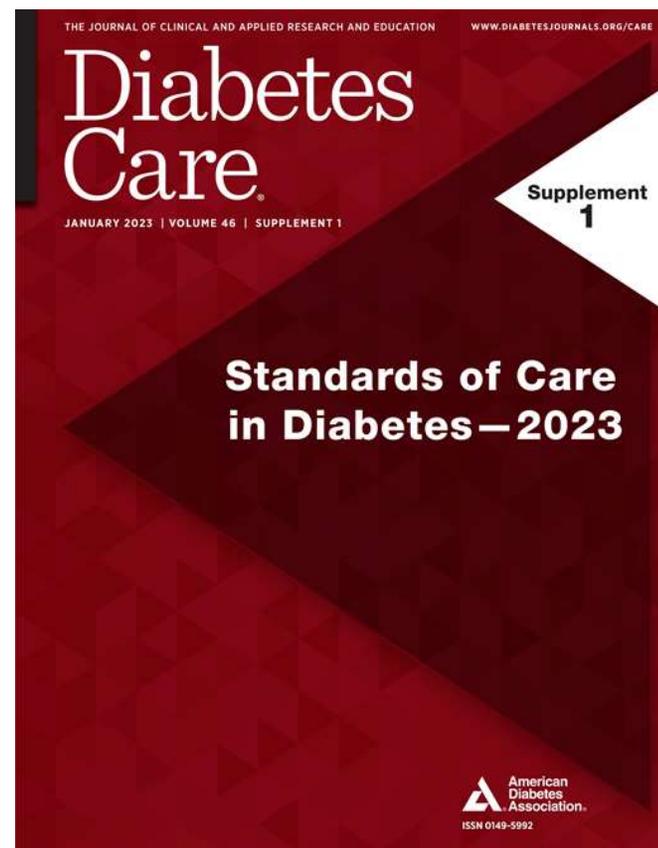
Taft ARC



Beverly Thomassian, RN, MPH, CDCES, BC-ADM
Diabetes Nurse
December 3, 2023

Beverly has no conflicts of interest

- ▶ Not on any speaker's bureau
- ▶ Does not invest in pharmaceutical or device companies
- ▶ Gathers information from reading package inserts, research and standards



Majority of Content from
ADA Standards
www.Diabetes.org

Topics for Best Diabetes Care

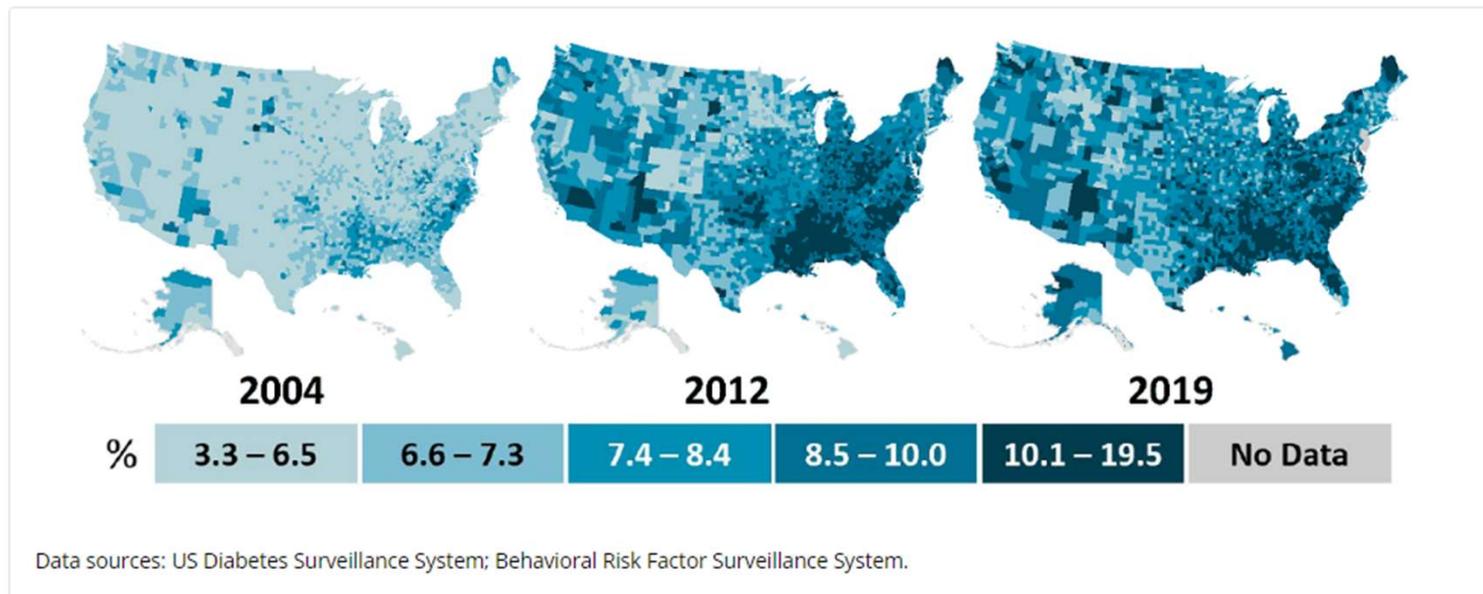
- ▶ From Prediabetes to Diabetes – How to Identify and Goals of Care.
- ▶ New diabetes medications that do more than just lower blood sugars.
- ▶ Identifying the highs and lows
- ▶ Eating healthy
- ▶ Steps to keep feet healthy
- ▶ Everyone's voice matters- strategies to collaborate with clients.
- ▶ The impact of social determinants and childhood experiences on our health – a Message of Hope

Type 2 Diabetes in America 2023

- ▶ 11.3% with Diabetes
 - ▶ 37 million adults
 - ▶ 23% don't know they have it
- ▶ 38% with Prediabetes – 96 mil



Figure 3. Age-adjusted, county-level prevalence of diagnosed diabetes among adults aged 20 years or older, United States, 2004, 2012, and 2019



Data sources: US Diabetes Surveillance System; Behavioral Risk Factor Surveillance System.

CDC Announces



35% of
Americans will
have Diabetes
by 2050

Boyle, Thompson, Barker, Williamson

2010, Oct 22:8(1)29

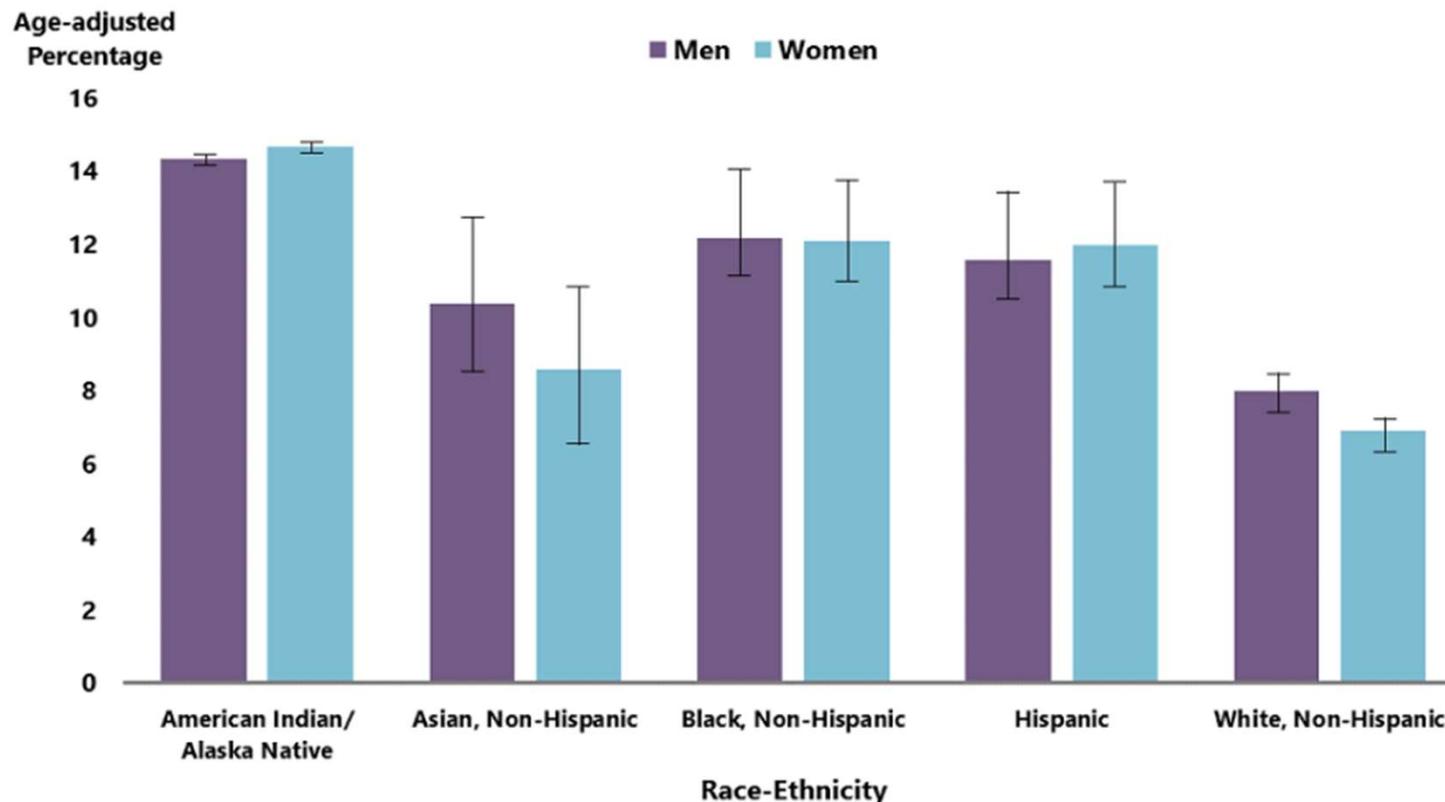
www.pophealthmetrics.com

Diabetes Prevalence by Ethnic Group

► For adults, diabetes prevalence highest among:

- American Indians and Alaska Natives (14.5%),
- Non-Hispanic Blacks (12.1%),
- People of Hispanic origin (11.8%),
- Non-Hispanic Asians (9.5%)

Figure 2. Age-adjusted estimated prevalence of diagnosed diabetes by race/ethnicity group and sex for adults aged 18 years or older, United States, 2018–2019



In Your Community

▶ Barriers to Healthy Living



▶ Opportunities for Healthy Living



Social Determinants of Health

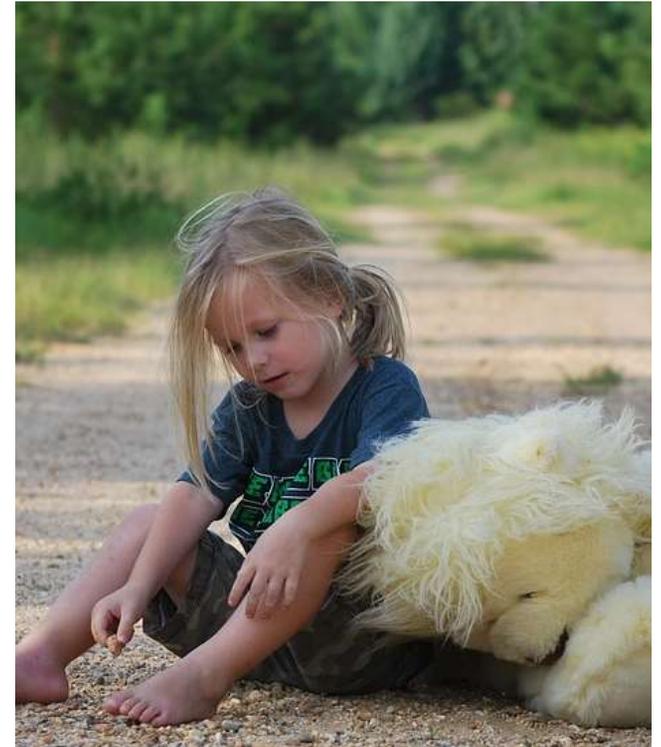
- ▶ The conditions in which people:
 - ▶ Play
 - ▶ Live
 - ▶ Work
 - ▶ Learn
 - ▶ Pray

Directly affects their health risks and outcome



Socioeconomics – Diabetes Prevalence

- ▶ Prevalence of diabetes varied significantly by education level
 - ▶ 7.1% - More than high school education
 - ▶ 9.2% - High school education
 - ▶ 13.4% - Less than high school education
- ▶ 13.7 – 14.4% of men and women with income below federal poverty level have highest prevalence of diabetes.



CDC 2023

Tailoring Treatment for Social Context

- ▶ “Social determinants of health (SDOH)—*often out of direct control of the individual* and potentially representing lifelong risk—contribute to health care and psychosocial outcomes and must be addressed to improve all health outcomes”

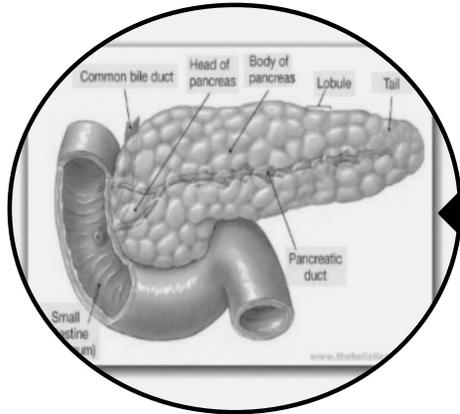


The ADA recognizes this relationship and is taking action.

Diabetes is Complex

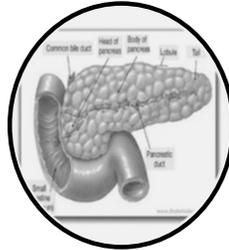


Natural History of Diabetes



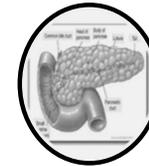
Happy Pancreas
Fasting <100
Random <140
A1c <5.7%

Yes!



Prediabetes
Fasting 100-125
Random 140 - 199
A1c ~ 5.7- 6.4%
50% working pancreas

NO



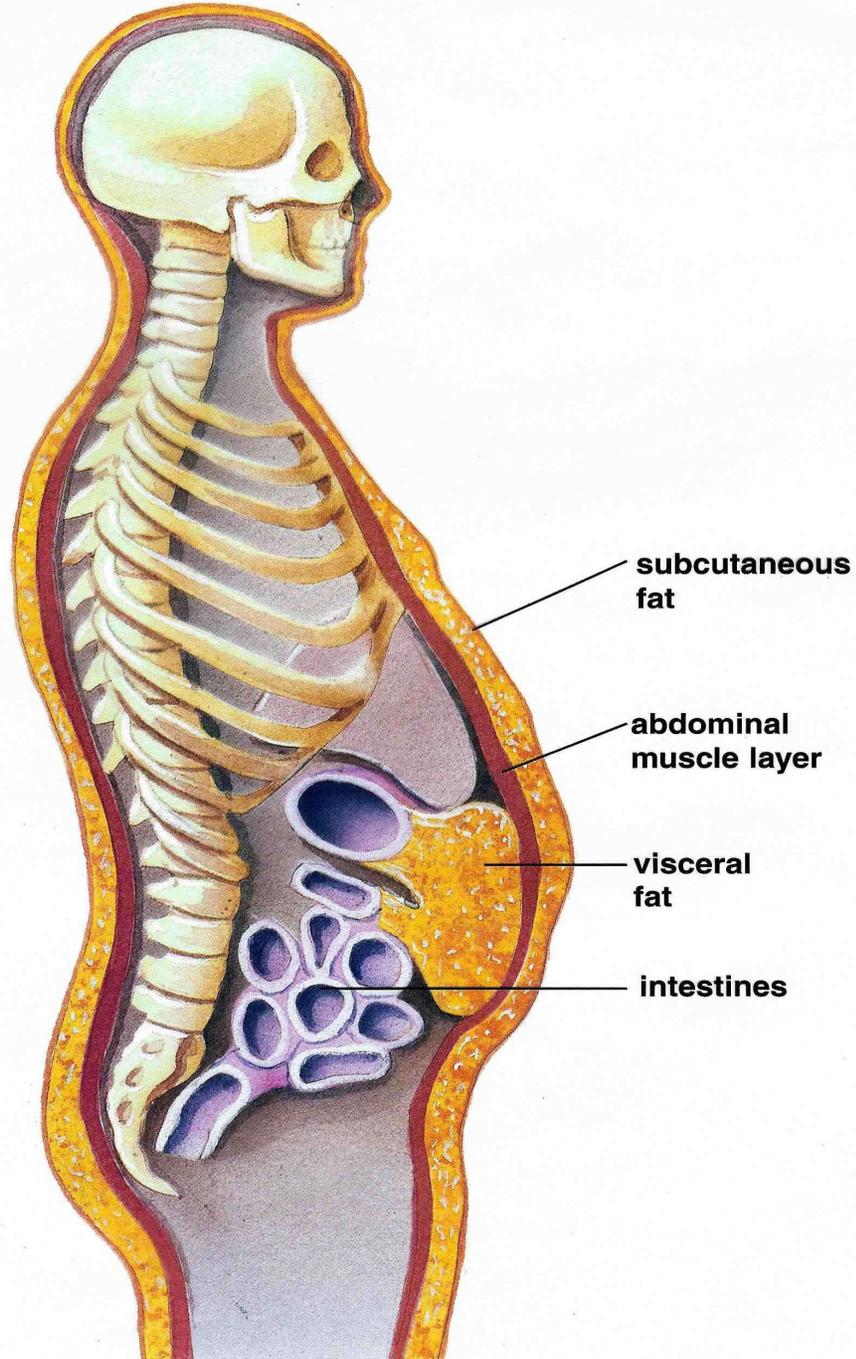
Diabetes
Fasting 126 +
Random 200 +
A1c 6.5% or +
20% working pancreas

Development of type 2 diabetes happens over years or decades

Preventing Pre Diabetes and Diabetes



Visceral Fat and Subcutaneous Fat

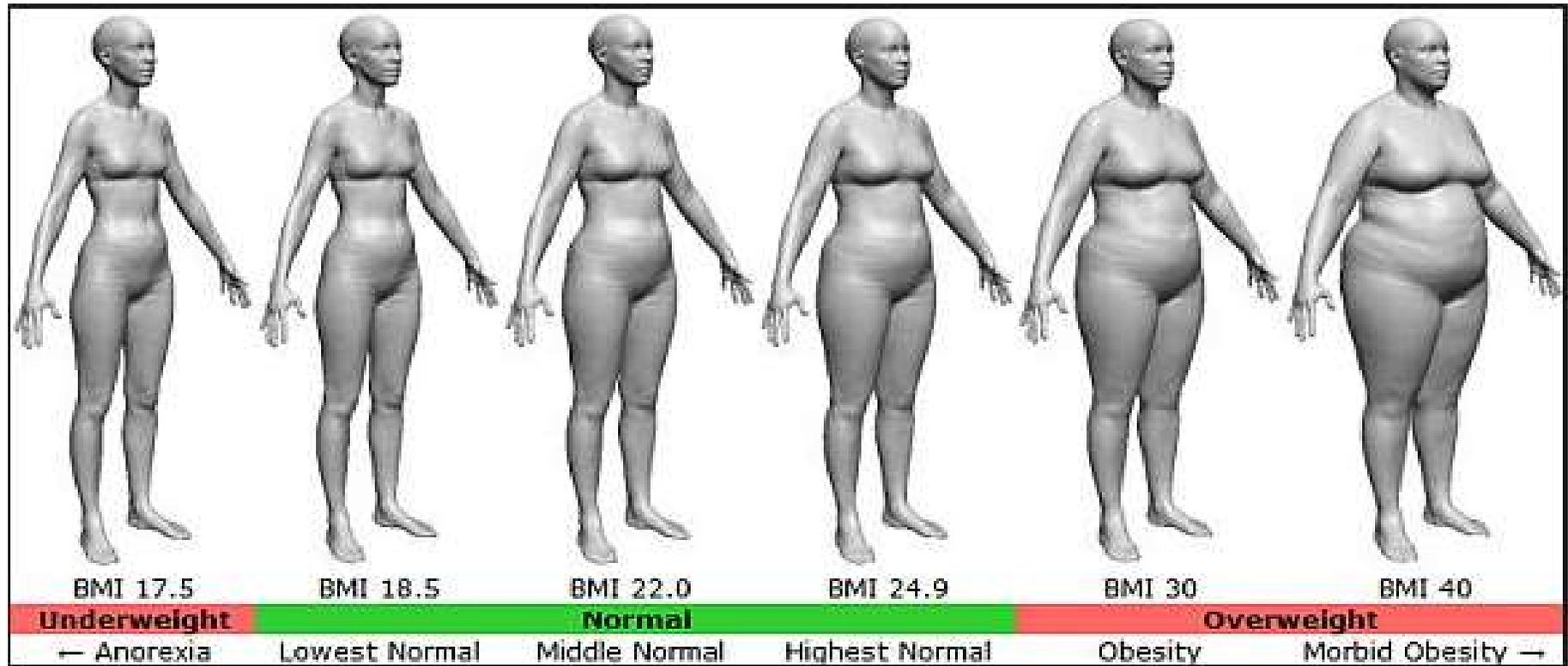


Pre Diabetes & Type 2- Screening Guidelines (ADA 2023 Clinical Practice Guidelines)

1. Start screening all people at age 35.
2. Screen at any age if BMI ≥ 25 (Asians BMI ≥ 23) plus one or > additional **risk factor**:
 - ▶ First-degree relative w/ diabetes
 - ▶ Member of a high-risk ethnic population
 - ▶ Habitual physical inactivity
 - ▶ PreDiabetes*
 - ▶ HIV on antiretroviral meds*
 - ▶ History of heart disease



BMI – Visual Image



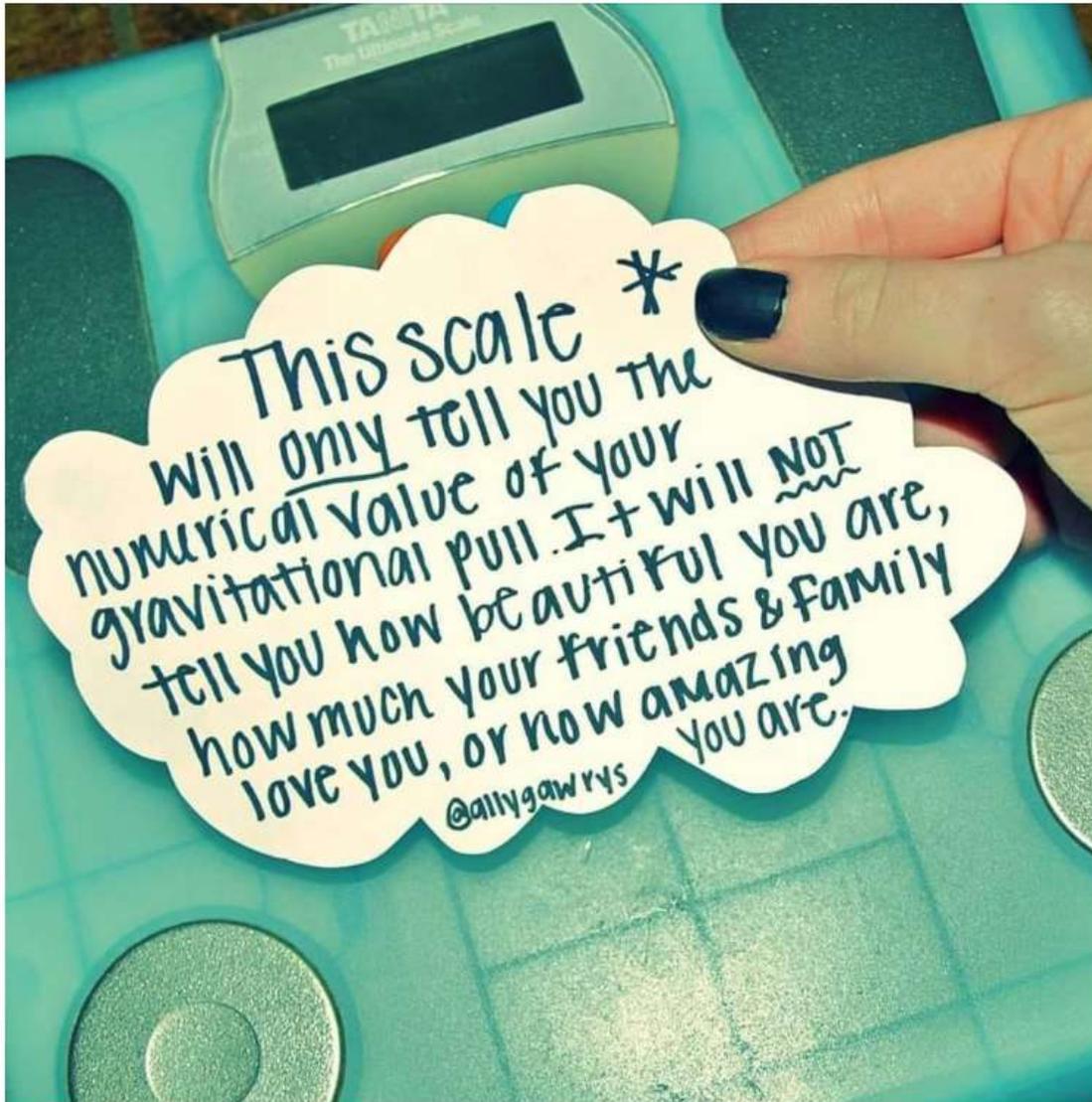
Underweight

Healthy weight

Experiencing overweight

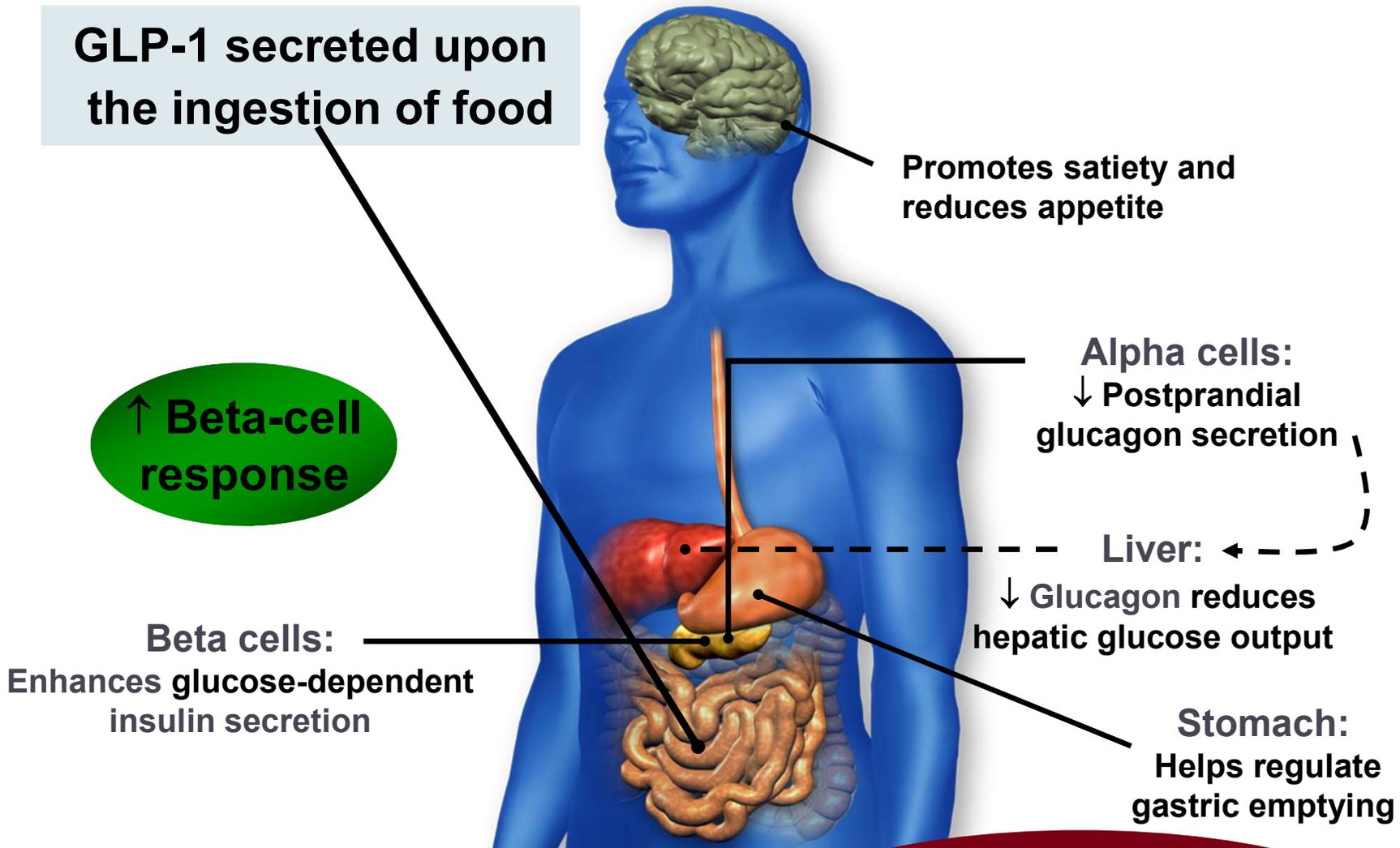
Experiencing obesity

Weight is a Heavy Issue



GLP-1 Effects in Humans

Understanding the Natural Role of Incretins



Adapted from Flint A, et al. *J Clin Invest.* 1998;101:515-520
Adapted from Larsson H, et al. *Acta Physiol Scand.* 1997;160:413-422
Adapted from Nauck MA, et al. *Diabetologia.* 1996;39:1546-1553
Adapted from Drucker DJ. *Diabetes.* 1998;47:159-169

**GLP-1 degraded by
DPP-4 w/in minutes**

GLP-1 Receptor Agonist Devices

Byetta



5mcg or 10mcg pen
1 pen/month
Requires Rx for needles

Ozempic



3 pen options: 0.5, 1, 2mg
1 pen/month
Comes with needles

Victoza



1.2mg, 2 pens/mo
- (15 doses per pen)
1.8mg, 3 pens/month
- (10 doses per pen)
Requires Rx for needles

Adlyxin



Contains 14 doses (20mcg)
2 pens/month
Requires Rx for needles

Bydureon



2mg pen
4 pens/month
Shake 15 seconds
Never see needle

Trulicity



0.75, 1.5, 3, 4.5mg pens
4 pens/month
Never see needle

Tirzepatide Clinical Use

2.5 MG
ONCE WEEKLY



Starting dose (for 4 weeks)
MONTH 1



5 MG
ONCE WEEKLY



For at least 4 weeks
MONTH 2

IF ADDITIONAL GLYCEMIC CONTROL IS NEEDED

7.5 MG
ONCE WEEKLY



For at least 4 weeks

10 MG
ONCE WEEKLY



For at least 4 weeks

12.5 MG
ONCE WEEKLY



For at least 4 weeks

15 MG
ONCE WEEKLY



Maximum dose

Benefits of GLP-1 & GIP Meds

“Gut Hormone Imitators”

A1C lowering
1-3%

Weight loss
4-13%

Cardiovascular

Less Appetite

Help with
fatty liver?

Once a week
Injection

Counseling Points: GLP-1 RA & GLP-1/GIP

- ▶ Avoid if personal or family history of medullary thyroid cancer
- ▶ Start at lower dose and gradually increase
- ▶ Eat smaller *nourishing* meals to reduce nausea
- ▶ Avoid high fat meals
- ▶ Reconsider nausea as feeling full
- ▶ Store extra pens in fridge
- ▶ Report any sudden abdominal pain or pancreatitis symptoms



Diabetes 2 - Who is at Risk?

(ADA Clinical Practice Guidelines)



Screen using A1c, Fasting Blood Glucose or OGTT.

If negative, repeat screening at least every 3 years.

*If prediabetes, on antiretroviral meds, recheck yearly

Risk factors cont'd

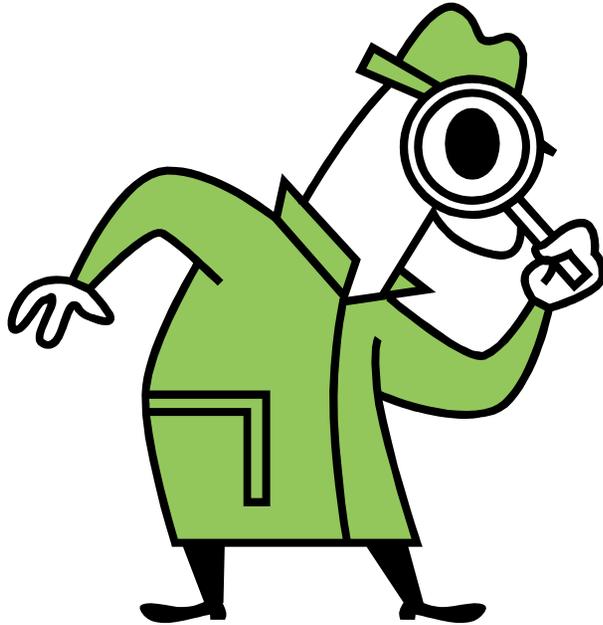
- ▶ BP > 140/90
- ▶ HDL < 35 or triglycerides > 250
- ▶ History of Gestational Diabetes Mellitus
- ▶ Polycystic ovary syndrome (PCOS)
- ▶ Other conditions assoc w/ insulin resistance:
 - ▶ Elevated BMI, acanthosis nigricans (AN)

Acanthosis Nigricans (AN)

- ▶ Signals high insulin levels in bloodstream
- ▶ Patches of darkened skin over parts of body that bend or rub against each other
 - ▶ Neck, underarm, waistline, groin, knuckles, elbows, toes
 - ▶ Skin tags on neck and darkened areas around eyes, nose and cheeks.
- ▶ No cure, lesions regress with treatment of insulin resistance



Diabetes Detectives Needed



- ▶ On average – takes 6.5 years to diagnose diabetes
- ▶ 1/4 of all people with diabetes don't know they have it
- ▶ 50% of Latino and Asians are undiagnosed

Signs of Diabetes

- ▶ Going to Bathroom
- ▶ Super thirsty
- ▶ Super hungry
- ▶ Weight loss without trying
- ▶ Fatigue – so tired
- ▶ Skin and other infections
- ▶ Blurry vision



Hyperglycemia (High Blood Glucose)

Causes: Too much food, too little insulin or diabetes pills, illness, or stress.

Onset: Often starts slowly.

Some
Symptoms:



EXTREME THIRST



NEED TO
URINATE OFTEN



DRY SKIN



HUNGRY



BLURRY
VISION



DROWSY



SLOW HEALING WOUNDS

HIGH BLOOD GLUCOSE MAY LEAD TO A MEDICAL EMERGENCY IF NOT TREATED.

Action

Test blood sugars

Drink fluids

Check ketones

Missed meds/injections?

Decrease carbs till figure
out solution

Report any signs of
infection.



Diabetes Classifications

- ▶ Type 1
- ▶ Type 2
- ▶ Gestational
- ▶ Secondary





Patti LaBelle

"divabetic"

"I have diabetes, it
doesn't have me"



What is Type 2 Diabetes?

- ▶ Complex metabolic problem (Insulin resistance and deficiency) with social, behavioral and environmental factors unmasking genetic risk.

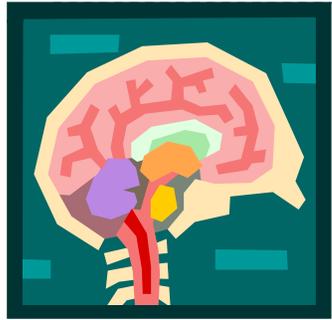


It's no one's
fault they
have
diabetes.

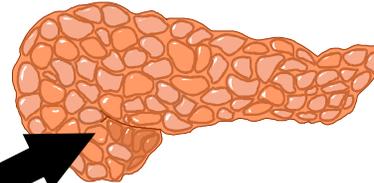
New Diagnosis?

Call 800 – DIABETES to
request “Getting Started Kit”
www.Diabetes.org

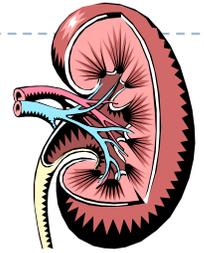
8 things Amiss - Type 2 Diabetes



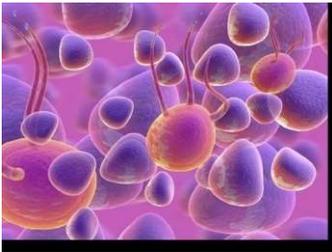
**Decreased
satiating neuro-
transmission**



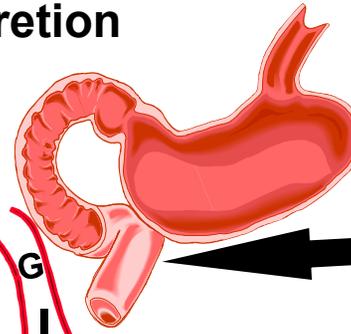
**Decreased
amylin, β -cell secretion
80% loss at dx**



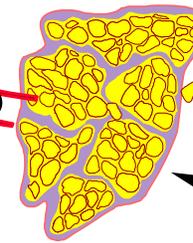
**Increased renal
glucose reabsorption**



**Increased glucagon
secretion**

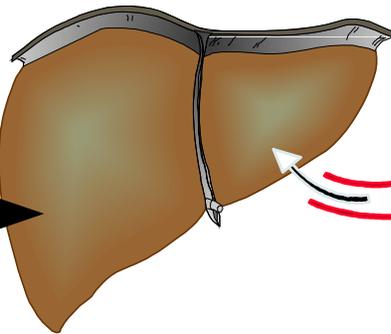


**Decreased
Gut hormones**

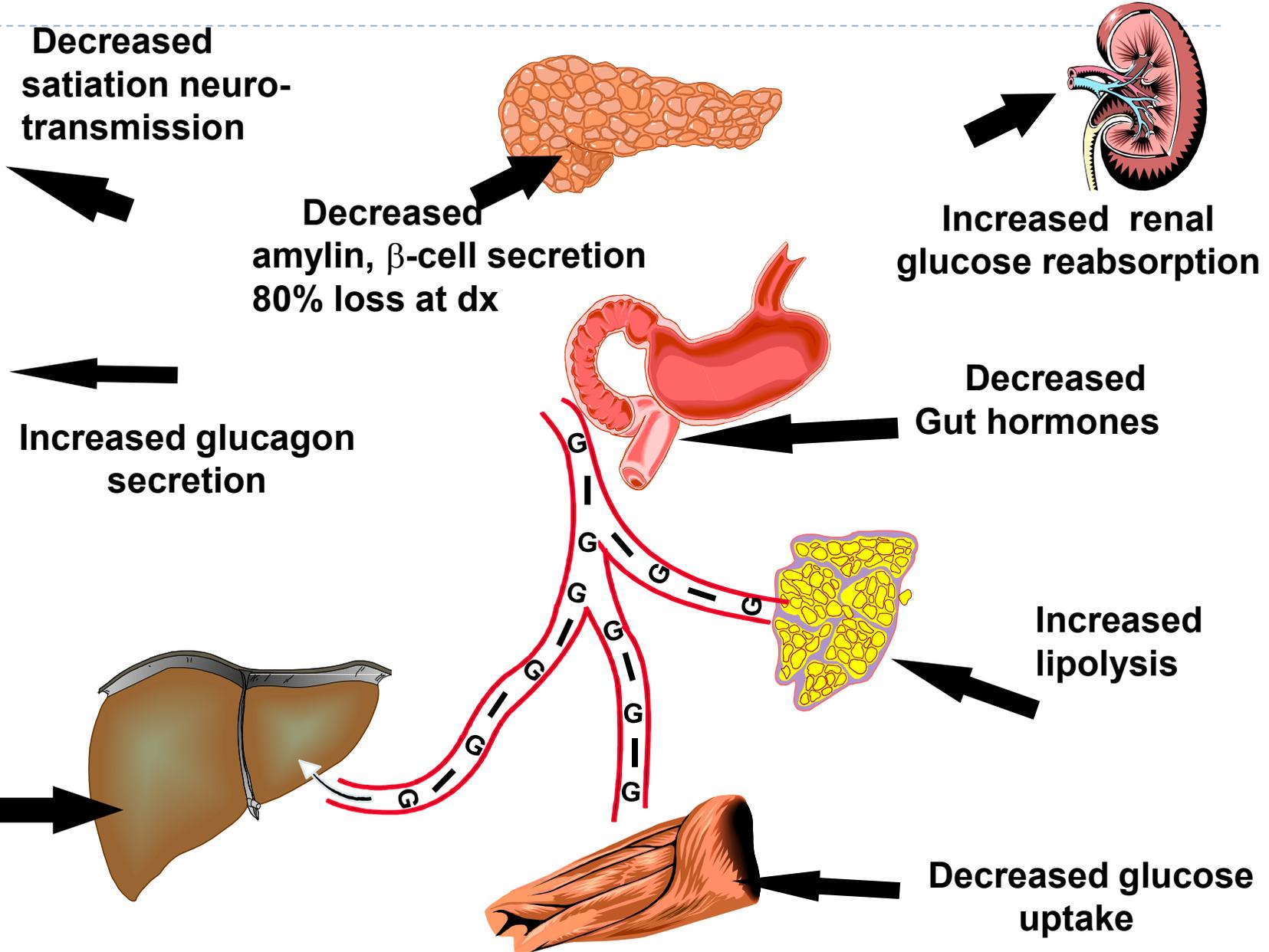


**Increased
lipolysis**

**Increase
glucose
production**



**Decreased glucose
uptake**



SGLT2 Inhibitors- “Glucoretics”

- ▶ **Action:** decreases renal reabsorption of glucose proximal tubule of kidneys (reset renal threshold)
- ▶ **Preferred** diabetes treatment for people with heart and kidney failure. Decreases BG & CV Risk.
- ▶ AWP: ~\$650 a month



Class/Main Action	Name(s)	Daily Dose Range	Considerations
SGLT2 Inhibitors “Glucoretic” • Decreases glucose reabsorption in kidneys	Canagliflozin* (Invokana)	100 - 300 mg 1x daily	Side effects: hypotension, UTIs, genital infections, increased urination, weight loss, ketoacidosis. Heart Failure, CV & Kidney Protection: 1st line therapy for Heart Failure (HF), Kidney Disease (CKD), Cardiovascular Disease, before or with metformin. Considerations: See Package Insert (PI) for GFR cut-offs, dosing. Limited BG lowering effect if GFR < 45, still benefits kidneys & heart at lower GFR. If CKD & GFR ≥20, use SGLT-2 to reduce CVD, HF, preserve renal function. (ADA/EASD) Benefits: SGLT-2s* reduce BG, CV death & HF, slow CKD. †Approved for peds, 10 yrs +. Lowers A1C 0.6% to 1.5%.
	Dapagliflozin* (Farxiga)	5 - 10 mg 1x daily	
	Empagliflozin*† (Jardiance)	10 - 25 mg 1x daily	
	Ertugliflozin (Steglatro)	5 – 15 mg 1x daily	
	Bexagliflozin (Brenzavvy)	20 mg 1x daily	

Benefits of SGLT-2 Inhibitors

“Glucoretics” – Urinate out Sugar

A1C lowering
0.6-1.5%

Weight loss
3-5 pounds

Cardiovascular

Protects
Kidneys
(GFR & UACR)

Helps with
Heart failure

Blood pressure
lowering

Side Effects of SGLT-2 Inhibitors

“Glucoretics” – Urinate out Sugar

Genital
infections

Volume
depletion

Increased
urination

Hypotension

Urinary Tract
Infection

Diabetes
ketoacidosis
(DKA)

SGLT-2i Indications Summary

Drug	Lower BG	Reduce CV Risk?	Use to treat Heart Failure?	Slow renal disease?
Dapagliflozin (Farxiga)	Yes	Yes	Yes +/- Diabetes	Yes
Empagliflozin (Jardiance)	Yes	Yes	Yes +/- Diabetes	Yes
Canagliflozin (Invokana)	Yes	Yes	Yes w/ Diabetes	Yes
Ertugliflozin (Steglatro)	Yes	No	Yes w/ Diabetes	Yes
Bexagliflozin (Brenzavvy)	Yes	NA	NA	NA

Quick Question 1

- ▶ A potential side effect of SGLT-2 Inhibitors is:
 - a. Genital Infections
 - b. Hypertension
 - c. Kidney tenderness
 - d. Increased uric acid

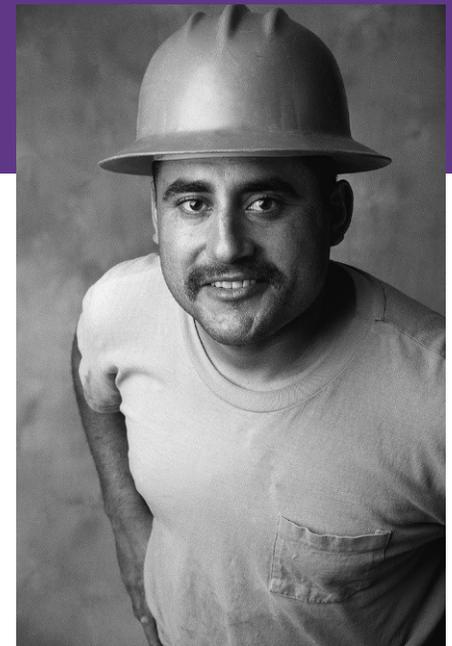


Case Study

Profile: 5'8", 192 lb male

Diabetes 12 years, on insulin 3 yrs

What type of DM and how do you know?



2. 5'6", 108 lb female

On insulin 3u bolus before meals,
10u basal insulin at bedtime

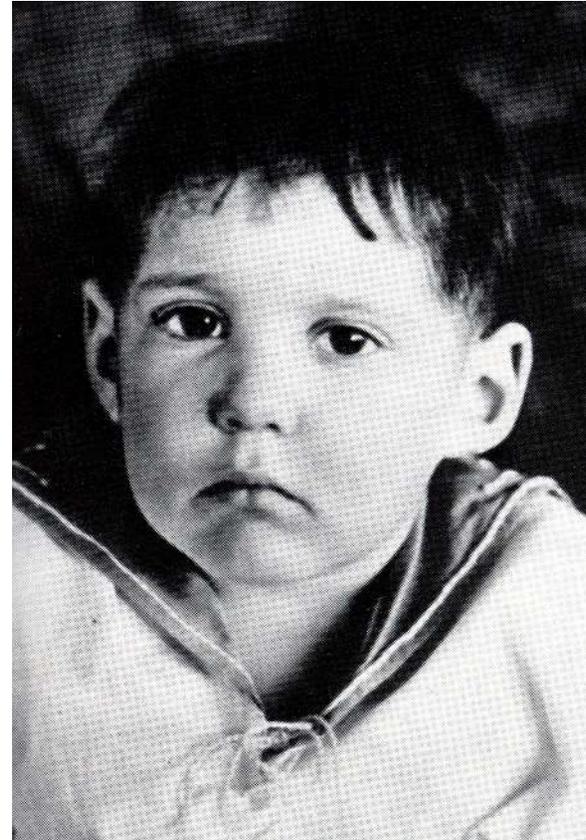
What type of DM and how do you know?



The Miracle of Insulin



Patient J.L., December 15, 1922



February 15, 1923

Incidence of Type 1 in Youth



- ▶ **General Pop 0.3%**
- ▶ **Sibling 4%**
- ▶ **Mother 2-3%**
- ▶ **Father 6-8%**
- ▶ Rate doubling every 20 yrs
- ▶ Many trials underway to detect and prevent (Trial Net)

Type 1 Rates Increasing Globally

- ▶ 23% rise in type 1 diabetes incidence from 2001-2009
- ▶ Why?
 - ▶ Autoimmune disease rates increasing over all
 - ▶ Changes in environmental exposure and gut bacteria?
 - ▶ Hygiene hypothesis
 - ▶ Excess weight?



Type 1 – 10% of all Diabetes

- Auto-immune pancreatic beta cells destruction
- Most commonly expressed at age 10 - 14
- Insulin sensitive (require 0.5 - 1.0 units/kg/day)
- Expression due to a combo of genes and environment:
 - Autoimmunity tends to run in families
 - Exposure to virus or environmental factors
- Signs can include:
 - Increased thirst and hunger
 - Frequent urination or new bed-wetting at hs
 - Unintended weight loss
 - Fatigue and irritability



Type 1 Diabetes Features?

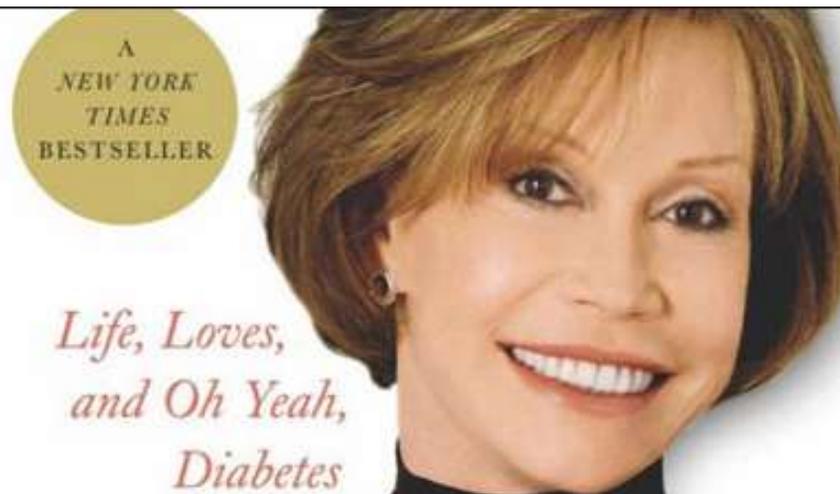


- ▶ AJ, 22 yr old admitted to the ICU with a blood glucose of 476 mg/dl, pH of 7.1. Recently lost 13 pounds.

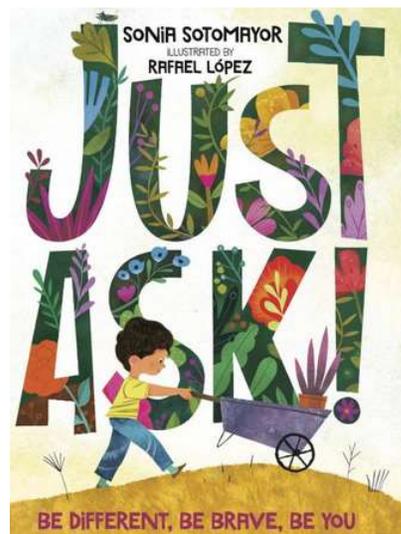
Type 1 Most Discriminative Features

- Younger than 35 years at diagnosis
- Lower BMI (<25 kg/m²)
- Unintentional weight loss
- Ketoacidosis
- Glucose 360 mg/dl or greater.

What Does Type 1 Look Like?



Mary Tyler Moore



Justice Sonia Sotomayor

Kate Moss' daughter Lila praised for wearing insulin pump on the catwalk: 'An inspiration to so many living with Type 1 diabetes'

The catwalk showcased a joint collection by Versace and Fendi on Sunday

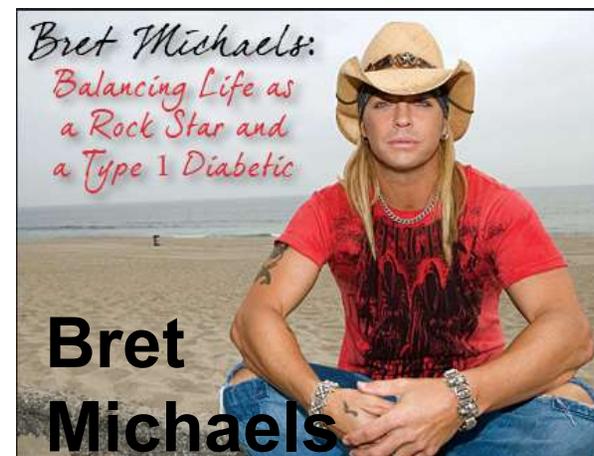
Saman Javed • Tuesday 28 September 2021 17:32 • Comments



Lila Grace Moss



Nick Jonas



Bret Michaels

Living with PreDiabetes or Diabetes?

How do we move from Dis-Ease to Well-Being?





Empathy has no script. There is no right way or wrong way to do it. It's simply listening, holding space, withholding judgment, emotionally connecting, and communicating that incredibly healing message of 'You're not alone.' Brené Brown

EMPATHY

PassItOn.com

THE FOUNDATION FOR A BETTER LIFE

Comparison of Type 1 and Type 2

Feature	Type 1	Type 2
▶ Excess weight	x	xxx
▶ Insulin dependence	xxx	30%
▶ Respond to oral agents	x	xxx
▶ Antibodies present	xxx	0
▶ Typical age of onset	puberty	40-65
▶ Insulin Resistance	x	xxx

DiaBingo

B Frequent skin and yeast infections can indicate?

B A BMI of _____ or more increases risk of diabetes

B To reduce complications, control **A**1c, **B**lood pressure, **C**holesterol

B PreDiabetes – fasting glucose level of ____ to _____

B Erectile dysfunction indicates greater risk for _____

B Diabetes – fasting glucose level _____ or greater

B Type 1 diabetes is best described as an _____ disease

B People with diabetes are _____ times more likely to die of heart dx

B Each percentage point of A1c = _____ mg/dl glucose

B At dx of type 2, about ___% of the beta cell function is lost

B Diabetes – random glucose _____ or greater

Diabetes Toolkit

CGM / Meter Supplies

- Strips that aren't expired?

Pump & Supplies

Site Evaluation

Low Glucose Plan

Meds & Disaster Plan

- ▶ Can access glucose reports?
- ▶ Diabetes ID
 - ▶ Phone, medic alert, on person
- ▶ Carbohydrate source
 - ▶ Granola bar, glucose tabs, GU, gummy bears
- ▶ Glucagon Rescue Meds

Devices to Inject insulin



Syringe
Pump



Pen



Injector



Choice of device is person centered and based on:

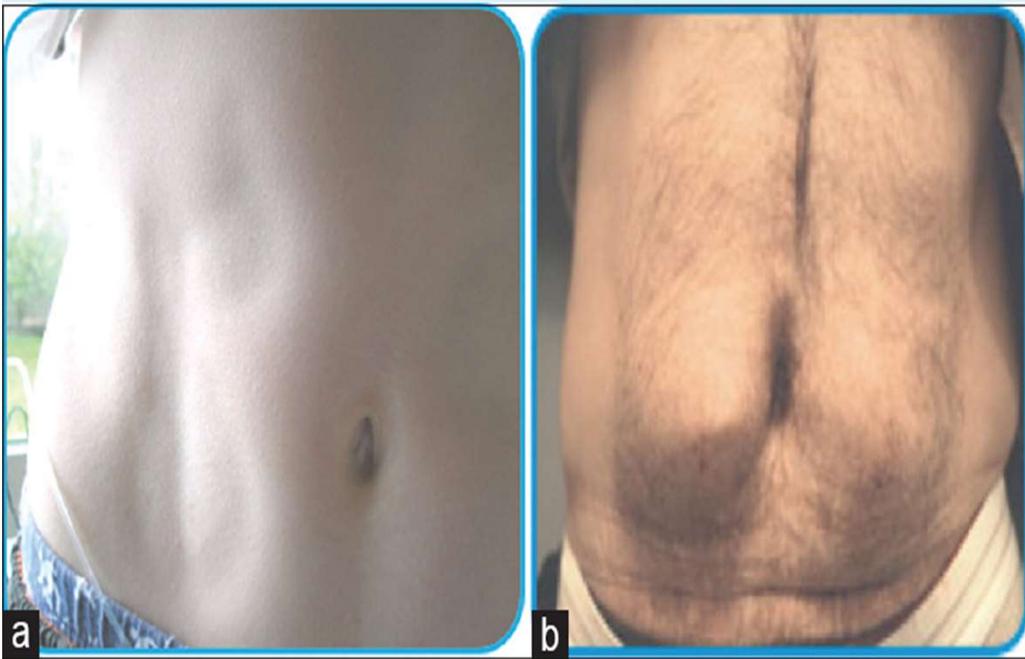
- Preference
- Cost
- Convenience

Poll Question 2

- ▶ RT says they keep using the same site for their insulin pump, since it doesn't hurt as much. When you evaluate their abdomen, you notice a large lump at the site. Why are you worried about this practice?
- ▶ A. Magnified risk of hypoglycemia
- ▶ B. Acanthosis nigricans
- ▶ C. Development of a lipoma
- ▶ D. Decreased insulin absorption

Evaluate Insulin & Injection Sites

- ▶ Keep unopened insulin in refrigerator
- ▶ Look for:
 - ▶ Lipodystrophy (a)
 - ▶ Lipohypertrophy (b)
- ▶ Make sure insulin isn't expired
- ▶ Proper disposal
- ▶ Review person's ability to insert and rotate sites for CGM, Pumps, injections



Basal Insulin

Another name is background insulin

- For those on an insulin pump, rapid acting insulin is infused through the pump 24 hours a day and referred to as the **basal insulin**.
- For those on injections they may use NPH, detemir, glargine, degludec.
- A person with a working pancreas, releases about 0.5 units of insulin an hour.

Insulin PocketCard™



DOWNLOAD SUCCESS!
Get Our Free CDCES Coach App

Action		Insulin Name	Onset	Peak	Duration	Considerations
Bolus	Very Rapid Acting Analogs	Aspart (Fiasp)	16 - 20 min	1 - 3 hrs	5 - 7 hrs	Bolus insulin lowers after-meal glucose. Post meal BG reflects efficacy. Basal insulin controls BG between meals and nighttime. Fasting BG reflects efficacy.
		Lispro-aabc (Lyumjev)	15 - 17 min	2 - 3 hrs	5 - 7 hrs	
	Rapid Acting Analogs	Aspart (Novolog)	20 - 30 min	1 - 3 hrs	3 - 7 hrs	
		Lispro (Humalog*/ Admelog)	30 min	2 - 3 hrs	5 - 7 hrs	
		Glulisine (Apidra)	15 - 30 min	1 - 3 hrs	3 - 4 hrs	
Short Acting	Regular*	30 - 60 min	2 - 4 hrs	5 - 8 hrs		
Basal	Intermediate	NPH	2 - 4 hrs	4 - 10 hrs	10 - 16 hrs	Side effects: hypoglycemia, weight gain. Typical dosing range: 0.5-1.0 units/kg body wt/day.
	Long Acting	Detemir (Levemir)	3 - 8 hrs	No peak	6 - 24 hrs	
		Glargine (Lantus*/Basaglar/Semglee/Rezvoglar)	2 - 4 hrs		20 - 24 hrs	
		Degludec (Tresiba)*	~ 1 hr		< 42 hrs	

Let's Move to Bolus Insulin

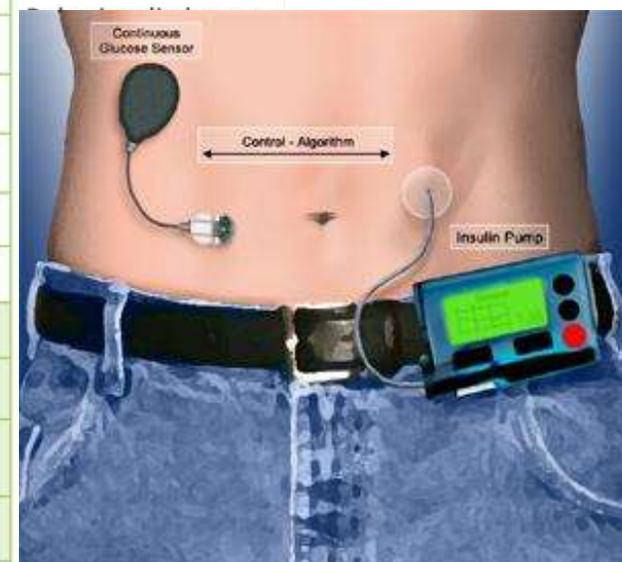
- These rapid acting insulins are used to cover the carbs in a meal or correct a high blood sugar.
- People with diabetes imitate the bolus release of insulin by injecting insulin or taking a bolus using a pump.

Insulin PocketCard™



DOWNLOAD SUCCESS!
Get Our Free CDCES Coach App

		Effective			
Action	Insulin Name	Onset	Peak	Duration	Considerations
Bolus	Very Rapid Acting Analogs	Aspart (Fiasp)	16 - 20 min	1 - 3 hrs	5 - 7 hrs
		Lispro-aabc (Lyumjev)	15 - 17 min	2 - 3 hrs	5 - 7 hrs
	Rapid Acting Analogs	Aspart (Novolog)	20 - 30 min	1 - 3 hrs	3 - 7 hrs
		Lispro (Humalog*/ Admelog)	30 min	2 - 3 hrs	5 - 7 hrs
		Glulisine (Apidra)	15 - 30 min	1 - 3 hrs	3 - 4 hrs
	Short Acting	Regular*	30 - 60 min	2 - 4 hrs	5 - 8 hrs
Basal	Intermediate	NPH	2 - 4 hrs	4 - 10 hrs	10 - 16 hrs
	Long Acting	Detemir (Levemir)	3 - 8 hrs	No peak	6 - 24 hrs
		Glargine (Lantus*/Basaglar/Semglee/Rezvoglar)	2 - 4 hrs		20 - 24 hrs
		Degludec (Tresiba)*	~ 1 hr		< 42 hrs



Continuous Glucose Monitoring (CGM)

- ▶ Lowers A1c $\sim 0.26\%$ (compared to SMBG)
- ▶ Consider CGM in children to adults on insulin, pregnancy
- ▶ Useful tool in those frequent hypoglycemia or hypoglycemia unawareness (alarm features)
- ▶ Measures percent of time in, above and below range
- ▶ Given variable adherence to CGM, assess ind readiness



CGM uses interstitial glucose – correlates with plasma glucose
Report glucose in

- Real time or
- Or intermittent scanning “flash” (isCGM) like **FreeStyle Libre**

Diabetes Wise – Non-Profit Site

DiabetesWise.org BETA

[Check Up](#)

[Sensors](#)

[Devices](#)

[Wisdom](#)

[Guides](#)



Helping You Find The Right Diabetes Devices For Your Life.

CHECKUP

DO YOUR DEVICES
STILL WORK FOR
YOUR LIFE?

Take a quick quiz to see what might
be your next diabetes care
upgrade.



[Check Up](#)

Ambulatory Glucose Report

- ▶ Standardized report with visual cues for those on CGM devices
- ▶ For most with type 1 or type 2 diabetes
 - > 70% of readings within BG range of 70-180mg/dL
 - < 4% of readings < 70 mg/dL
 - < 1% of readings < 54 mg/dL
 - < 25% of readings > 180 mg/dL
 - < 5% of readings > 250 mg/dL
- ▶ For under 25 years, with A_{1c} goal is < 7.5%, time-in-range target is set to about 60%.



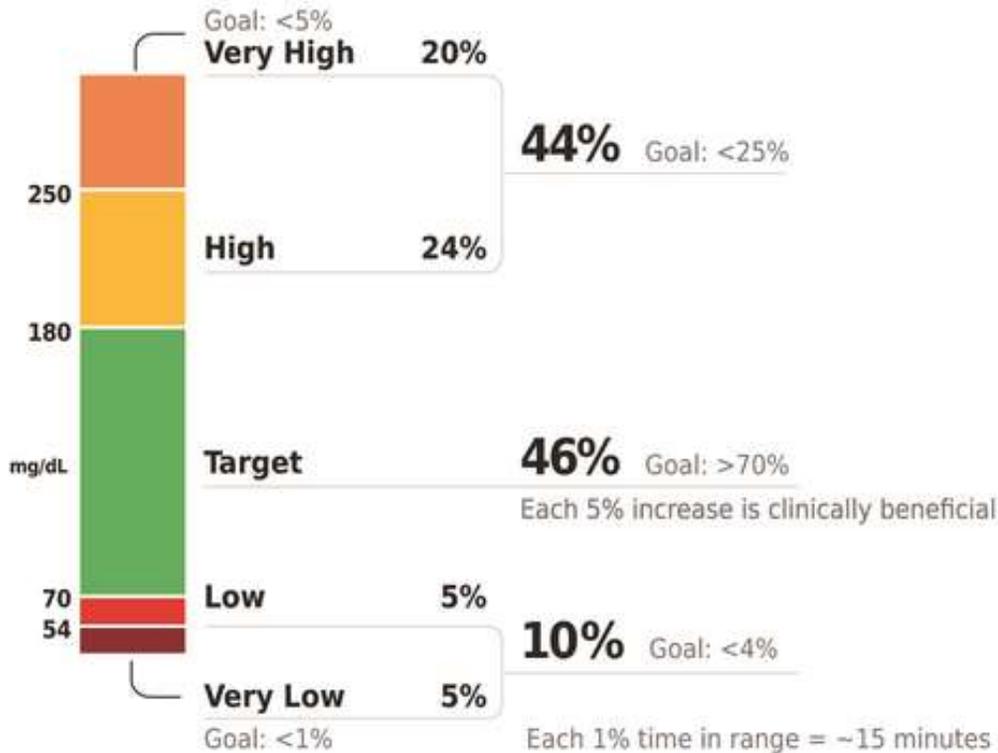
AGP Report

Name _____

MRN _____

AGP Report: Continuous Glucose Monitoring

Time in Ranges Goals for Type 1 and Type 2 Diabetes



Test Patient DOB: Jan 1, 1970

14 Days: August 8-August 21, 2021

Time CGM Active: 100%

Glucose Metrics

Average Glucose **175 mg/dL**
Goal: <154 mg/dL

Glucose Management Indicator (GMI) **7.5%**
Goal: <7%

Glucose Variability **45.5%**
Defined as percent coefficient of variation
Goal: ≤36%

Ambulatory Glucose Profile (AGP)

6. Glycemic Targets: *Standards of Medical Care in Diabetes—2022*

FREE

American Diabetes Association Professional Practice Committee

Check for updates

Diabetes Care 2022;45(Supplement_1):S83–S96

<https://doi.org/10.2337/dc22-S006>

Bolus Insulin and Carb Counting

- The insulin bolus covers the carbs consumed as evidenced by post meal glucose levels on target.
- The goal is to make sure that carb count is accurate, or else the person either
 - ends up taking too much or too little insulin
 - and glucose levels are above or below target.



During the Embark Trial, many people were struggling with carb counting.

Write down what you ate:

- ▶ For breakfast today
- ▶ For dinner last night
- ▶ Which foods were carbs?



Carb counting- starch

Each Food has:
80 Calories
15 grams carb



1/2 cup
cooked beans



1 small ear of corn or
1/2 cup corn



1/3 cup
cooked pasta

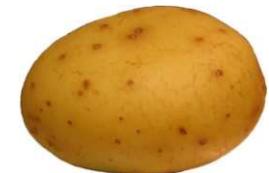
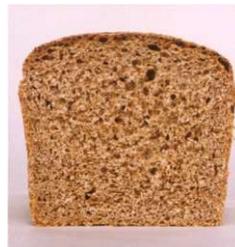


3/4 cup cold
cereal



1/3 cup
cooked rice

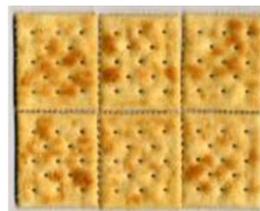
1 slice bread



1 small potato



1 small tortilla



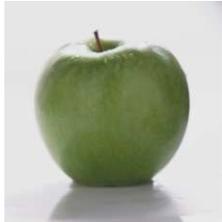
5-6 small crackers



1/2 English muffin

Carb counting- fruit

Each Food has:
60 Calories
15 grams carb



1 small fresh fruit



1/2 cup fruit juice

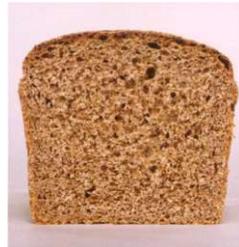


1/2 banana

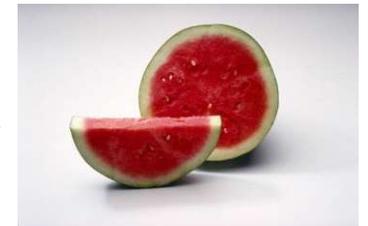


1/2 cup unsweetened apple sauce

1 slice bread



17 small grapes



1 cup melon



1/4 cup dried fruit



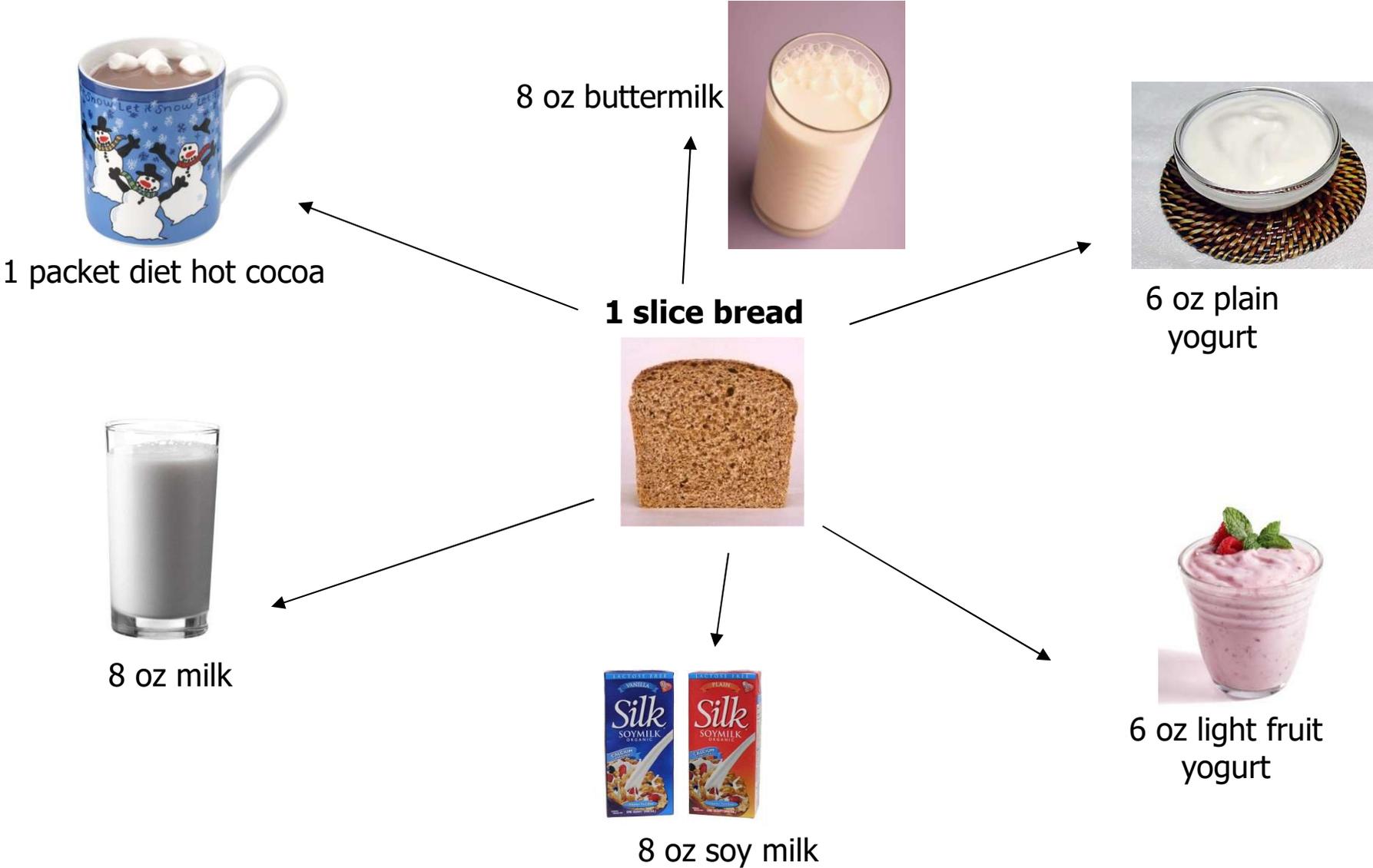
2 tbsp raisins



1 1/4 cup strawberries

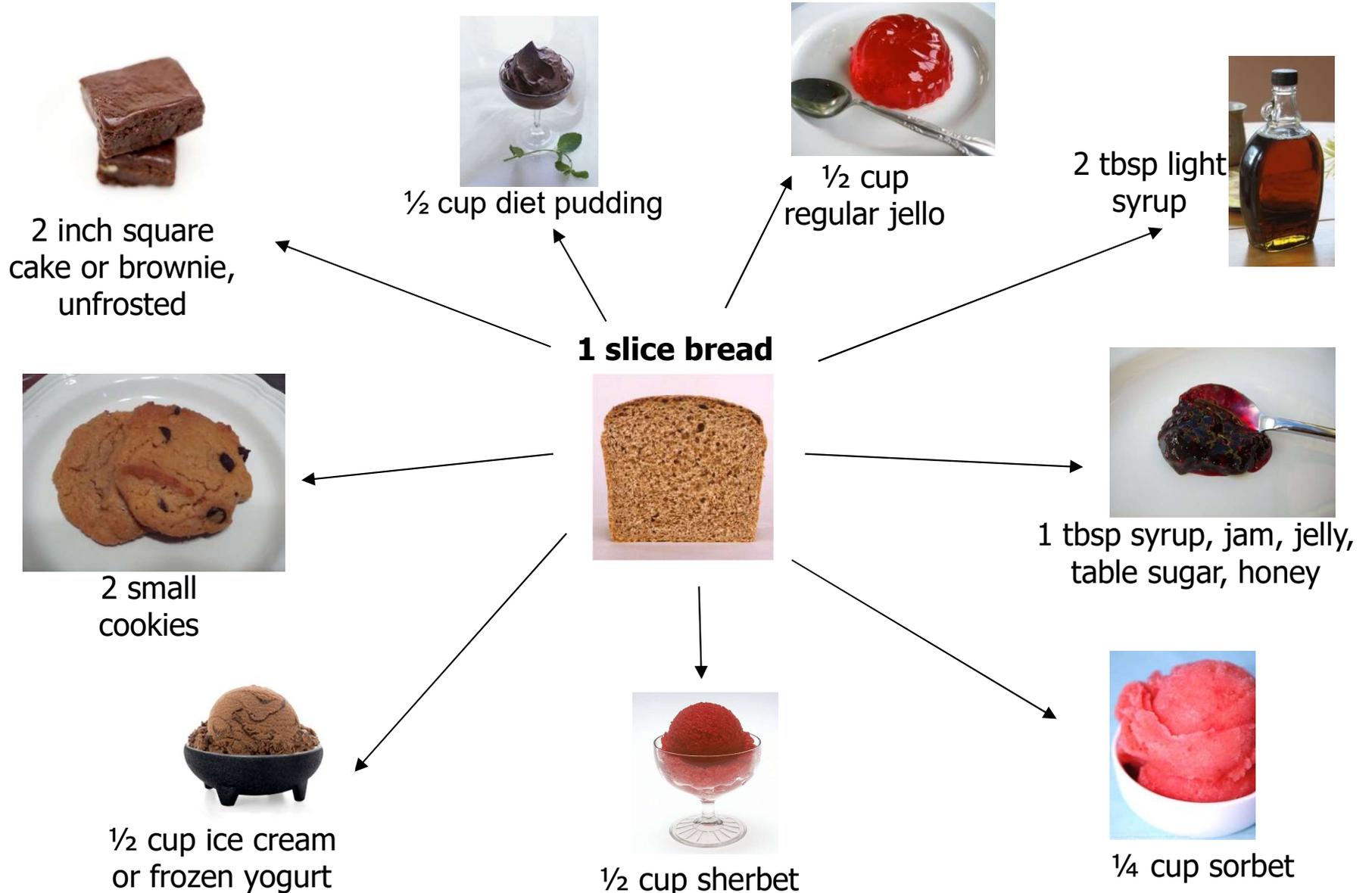
Carb counting- milk

Each Food has:
90-150 calories
12-15 grams carb



Carb counting - sweets

Each Food has:
Calories vary
15 grams carb



Bolus Dosing for Carbs – How Much?

You might want to ask the person you are working with, how much insulin would they give for each example.

Example: If carb ratio is 1 unit for each 15g CHO

Poll 3: How many grams of carb in this breakfast?



Poll 4: How many units of insulin for this breakfast?



Tips on Accurate Carb Counting

- ▶ Here are some strategies people can use to count carbs accurately (or come up with a really good estimate).
- ▶ Most people use a “best guess,” but for checking the accuracy of carb ratios, the count needs to be very accurate.

- ▶ **Here are some helpful tools:**

- Food labels
- Phone apps (Calorie King, My Fitness Pal)
- Websites
- Carb counting books
- Cookbooks
- Fast food and chain restaurant brochures

Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 235mg	6%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Medic Alert – Just in Case

LaurensHope.Com



Shop Women's Medical ID Jewelry



Lynx Bracelet
\$49.99



Kiddo Titanium MedicAlert Bracelet
\$29.99



Quest Medical ID Bracelet
\$29.99

MedicAlert.org



Elegant Medical Alert



Hypoglycemia (Low Blood Glucose)

Some Symptoms:

Causes: Too little food or skipping a meal; too much insulin or diabetes pills; more active than usual.

Onset: Often sudden.



SHAKY



FAST
HEARTBEAT



SWEATING



DIZZY



ANXIOUS



HUNGRY



BLURRY VISION



WEAKNESS OR FATIGUE



HEADACHE



IRRITABLE

IF LOW BLOOD GLUCOSE IS LEFT UNTREATED, YOU MAY PASS OUT AND NEED MEDICAL HELP.

Hypoglycemia: Identify, Treat, & Prevent

PocketCards are updated twice yearly.
Scan QR code to download or
order the latest version.



Step 1

Identify your signs of hypoglycemia or low blood sugar:

- Sweaty
- Shaky
- Hungry
- Can't think straight
- Headache
- Irritated, grouchy
- Other



Step 2

If have signs of hypo, treat with carbs until glucose reaches 70+, then eat usual meal.

- Sugary drink, 4–8oz
- Piece of fruit
- Raisins, handful
- Glucose tabs, 4+
- Honey/glucose gel
- Skittles candy, 15+



Step 3

Have glucagon rescue meds available.

In case of severe hypo, identify someone (ahead of time) who can get medical help & give a glucagon rescue medication.

Notify your provider of low blood sugar events.

Hypoglycemia Levels:

Level 1 – Glucose less than 70

Level 2 – Glucose less than 54

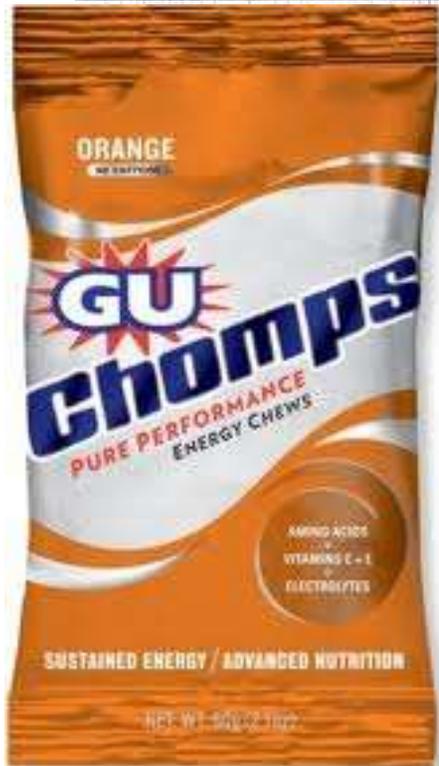
Level 3 - Severe, needs assistance

Identify Causes of Hypo & Problem Solve to Prevent Future Episodes

- » Low carb meal
- » Extra activity
- » Drinking alcohol

- » Delayed, missed meal
- » Too much insulin/meds
- » Insulin timing

Treatment for Low Blood Sugars



Glucagon Rescue Medications for Diabetes-Related Hypoglycemia



Name/Delivery	Supplied	Dose Range		Age / Route / Storage
		Adult	Peds / Age WT Dosing	
Glucagon Emergency Kit Injection requires mixing glucagon powder	1mg / 1mL vial + syringe	1mg	0.03mg/kg or < 6yrs or < 25 kgs 0.5mg ≥ 6yrs or > 25kgs 1mg	All ages approved SubQ or IM admin Expires in 2 years at room temp.
Baqsimi Nasal glucagon powder	3 mg intranasal device	3 mg	< 4 yrs: not recommended 4 yrs or older 3mg dose	Approved Age 4+ Nasal admin Expires ~ 2 years at room temp (keep in shrink-wrapped tube).
Gvoke Injectable liquid stable glucagon solution	0.5mg/1.0mg prefilled syringe or 0.5mg/1.0mg HypoPen auto-injector	1 mg	< 2yrs: not recommended 2- 12 yrs < 45kg 0.5mg ≥ 45kg 1mg 12 yrs or older 1mg	Approved Age 2+ SubQ admin in arm, thigh, abdomen Expires in 2 years at room temp (keep in foil pouch).
Dasiglucagon (Zegalogue) Stable liquid glucagon analog	0.6mg/0.6mL Prefilled syringe Autoinjector	0.6mg	< 6yrs: not recommended 6 yrs or older 0.6mg	Approved Age 6+ SubQ in abdomen, buttocks, thigh outer upper arm Expires in 1 year at room temp. (store in red protective case).

***All raise BG 20+ points. Can cause nausea, vomiting. After admin, roll person on side. Seek medical help. If no response after 1st dose, give 2nd dose in 15 mins. When awake, give oral carbs ASAP when safe to swallow. Please consult package insert for detailed info.**

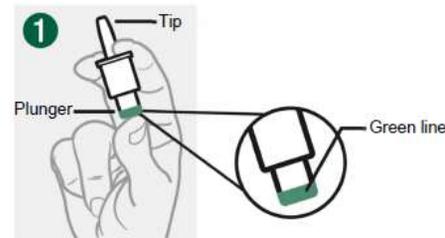
All PocketCard content is for educational purposes only. Please consult prescribing information for detailed guidelines.

Nasal Glucagon - Baqsimi

- ▶ Approved for ages 4 +
- ▶ Absorbed nasally
- ▶ No reconstitution or refrigeration needed
- ▶ Kept in temps up to 86
- ▶ Raises BG 67-73 mg/dl
- ▶ Don't use in those with
 - ▶ Pheochromocytoma
 - ▶ Insulinoma
 - ▶ See package insert



Giving the Dose



- Hold Device between fingers and thumb.
- Do not push Plunger yet.



- Insert Tip gently into one nostril until finger(s) touch the outside of the nose.



- Push Plunger firmly all the way in.
- Dose is complete when the Green Line disappears.

Gvoke HypoPen – Single dose injector

Gvoke HypoPen™
(glucagon injection)

1 mg per 0.2 mL

NDC 72065-121-11 Rx Only

Contains 1 Single-Dose Auto-Injector

FOR LOW BLOOD SUGAR EMERGENCY

1. Prepare

Tear Open Pouch at Dotted Line. Remove Auto-Injector.



Pull off Red Cap.



Choose Injection Site and Expose Skin.

Front View

Back View



Lower Abdomen, Outer Thigh,
or Outer Upper Arm

2. Inject

Push Down on Skin to Start. Hold Down for 5 Seconds.
Wait for Window to Turn Red.



Hold Down for 5 Sec.



3. Assist

Turn Patient on Side.
Call Emergency Medical Help.



After the Injection, Put the Used Pen in a Safe Place Until It Can Be Disposed of Into a FDA Cleared Sharps Container.



Dasiglucagon (Zegalogue)



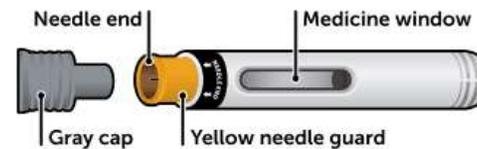
Red protective case



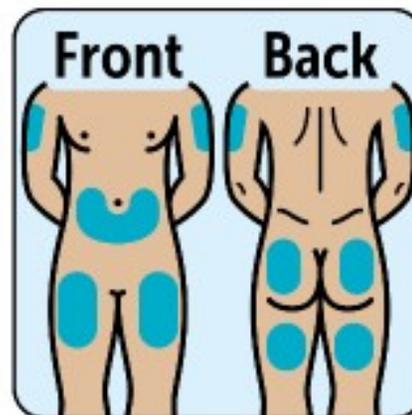
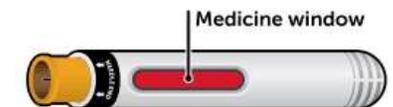
ZEGALOGUE

Autoinjector

Before injection



After injection



Toolkit Detail Summary

Device/Med	Tips
Meter	<ul style="list-style-type: none">▪ Ensure that strips are stored properly and are not expired.▪ Ensure sample is not contaminated – fruit juice, lotion, etc.▪ Use to double check CGM or if CGM is not in use
Insulin	<ul style="list-style-type: none">▪ Check storage temperature and expiration date.▪ Start new vial/pen at least once each month.
Insulin Pump	<ul style="list-style-type: none">▪ Check tubing for air.▪ Change set site every 3 days.▪ Consider insulin flow interruption – crimped set.
Injection Site	<ul style="list-style-type: none">▪ Rotate sites▪ Avoid overused areas
CGM	<ul style="list-style-type: none">▪ Calibrate if needed – best to do when BG is stable.

ABC's of Diabetes

- ▶ **A**1C less than 7% (individualize)
 - ▶ Pre-meal blood sugar 80-130
 - ▶ Post meal blood sugar <180
 - ▶ AGP - Time in Range (70-180) 70% of time
- ▶ **B**lood Pressure < 130/80
- ▶ **C**holesterol – Age 40+, cholesterol medication recommended (statin)
 - ▶ LDL <70 (lousy cholesterol) if at higher risk
 - ▶ LDL <55 if had heart attack or stroke



A1c and Estimated Avg Glucose (eAG)

<u>A1c (%)</u>	<u>eAG</u>
5	97 (76-120)
6	126 (100-152)
7	154 (123-185)
8	183 (147-217)
9	212 (170 -249)
10	240 (193-282)
11	269 (217-314)
12	298 (240-347)

$eAG = 28.7 \times A1c - 46.7 \sim 29 \text{ pts per } 1\%$
Translating the A1c Assay Into eAG – ADAG Study

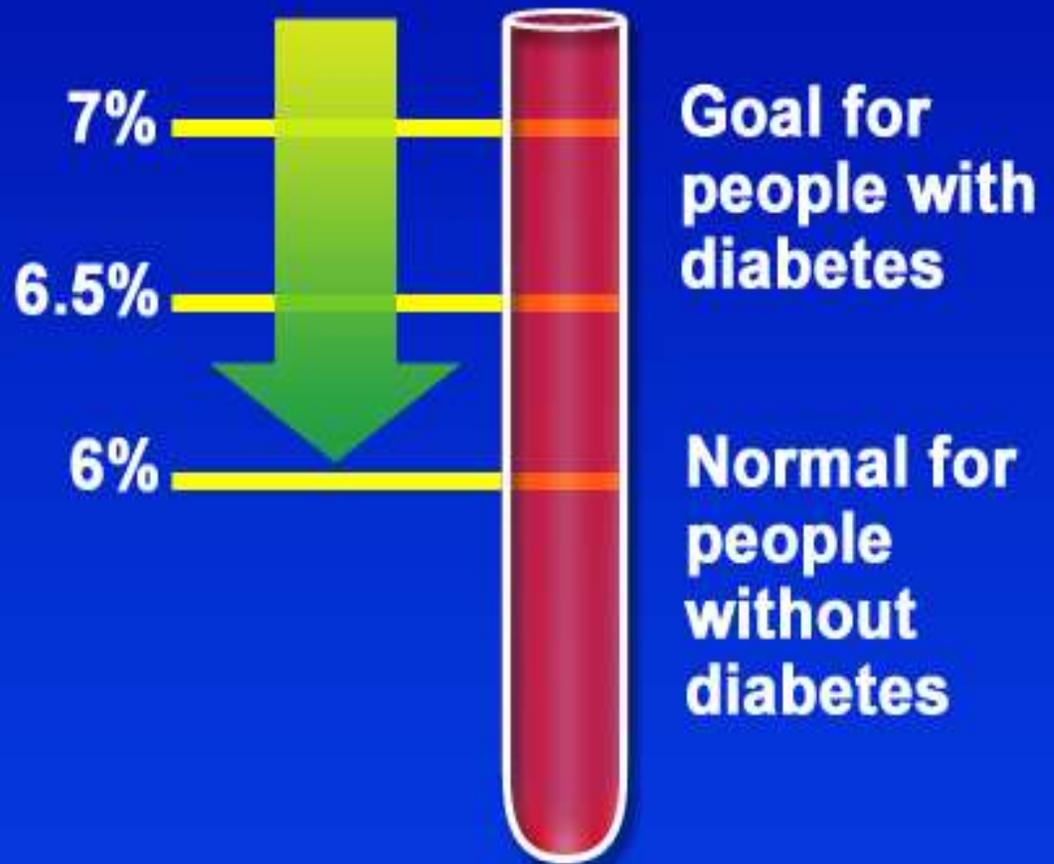


6. Glycemic Targets: *Standards of Medical Care in Diabetes—2020*

American Diabetes Association
Diabetes Care 2020 Jan; 43(Supplement 1): S66-S76.
<https://doi.org/10.2337/dc20-S006>

A1C Blood Test

This blood test checks the average blood glucose over the past 2 – 3 months



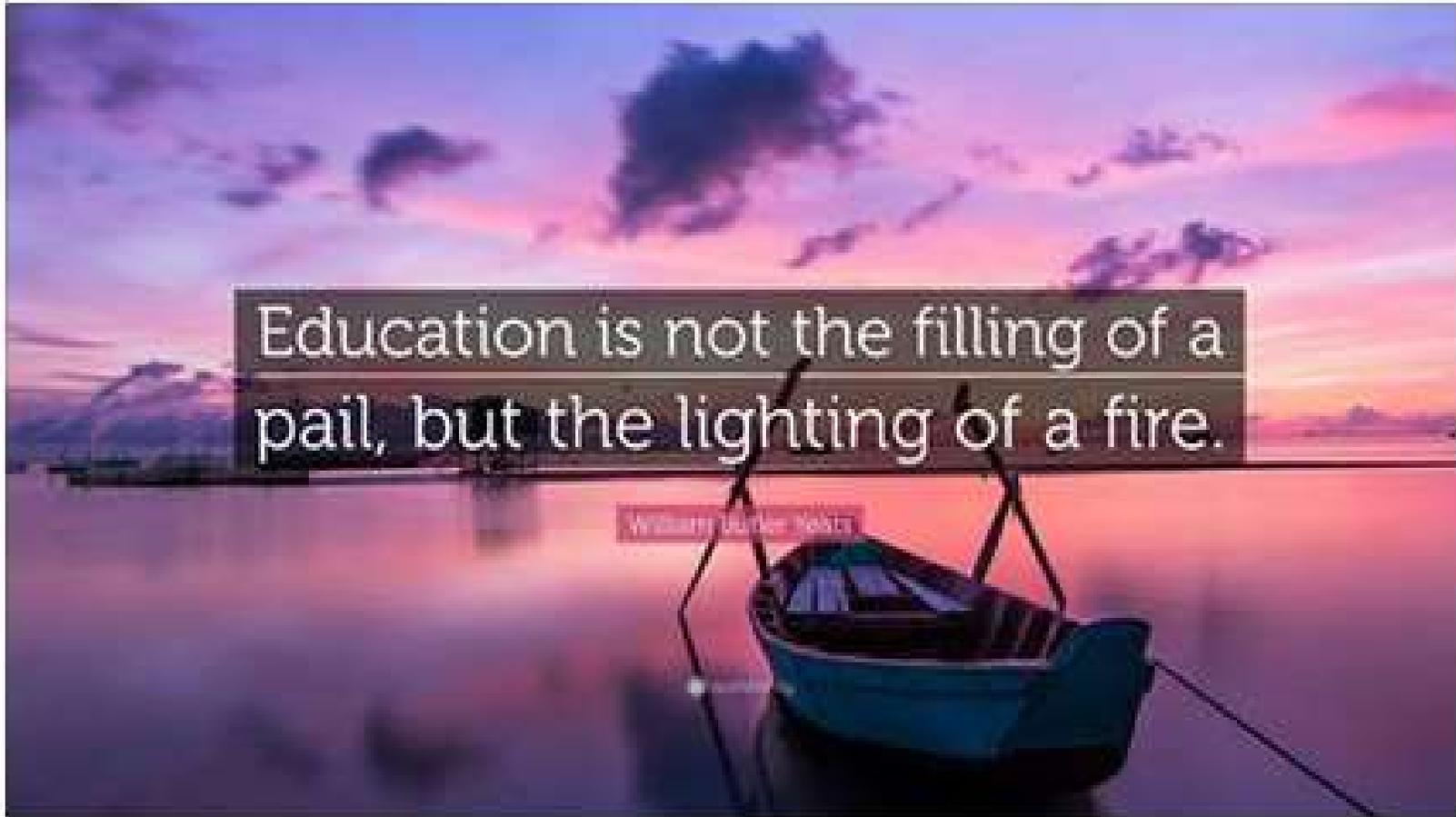
Why bother?

Blood sugars matter!

- ▶ Every 1 point drop in A1c causes a 35% decrease in diabetes problems.
- ▶ By getting active and eating healthy.
- ▶ Medications like insulin, injections and pills help too.
- ▶ Keep your pancreas happy.
- ▶ It's worth it!



Motivation comes from within.



Rediscover the Spark

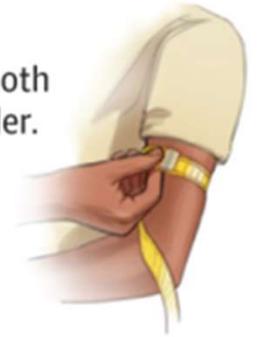
Blood Pressure is
really
important.



Goal is 130/80 or
less (if safe for
you).

Choosing the correct blood pressure cuff size

Measure the circumference of your upper arm with a cloth measuring tape midway between the elbow and shoulder. Choose a cuff size that includes this measurement.



Position for taking your blood pressure at home

- 1 Rest for 5 minutes before measuring your blood pressure.
- 2 Sit in a chair with both feet flat on the ground and back straight.
- 3 Place your arm at the level of your heart or chest.
- 4 Stay still and do not talk as your blood pressure machine operates.

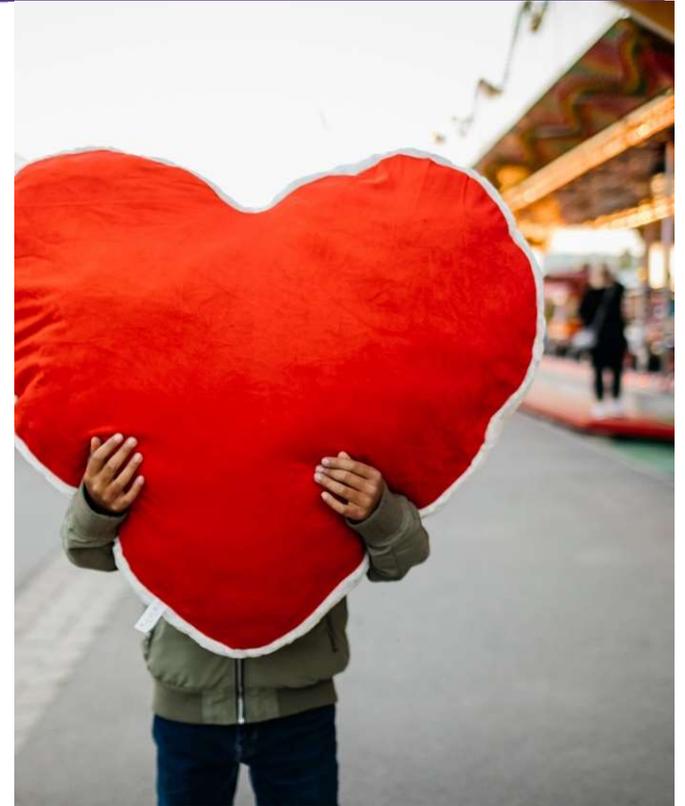


Measure your blood pressure in the morning right after you wake up or in the evening before you go to bed.

Try to measure your blood pressure at the same time every day.

Cholesterol Goals

- ▶ **Cholesterol** – If over 40 years, cholesterol medication (statin) + diet and exercise recommended.
- ▶ **Goals**
 - ▶ **LDL (lousy)**
 - LDL (lousy) cholesterol target less than 70 if at high risk
 - LDL cholesterol target less than 55 if had heart attack or stroke
 - ▶ Triglycerides less than 150
 - ▶ HDL (happy) more than 40



Statin Dosing

High Intensity:

Lowers LDL $\geq 50\%$

- ▶ Lipitor (atorvastatin)
 - ▶ 40-80mg
- ▶ Crestor (rosuvastatin)
 - ▶ 20-40mg

*****If can't tolerate intended statin dose, use maximally tolerated dose**

Moderate Intensity:

Lower LDL 30- $<50\%$

- ▶ Lipitor (atorvastatin)
 - ▶ 10-20mg
- ▶ Crestor (rosuvastatin)
 - ▶ 5-10mg
- ▶ Zocor (Simvastatin)
 - ▶ 20-40mg
- ▶ Pravachol (pravastatin)
 - ▶ 40 – 80mg
- ▶ Mevacor (lovastatin) 40 mg
- ▶ Lescol (fluvastatin) XL 80mg
- ▶ Livalo (pitavastatin) 2-4mg

Cardiovascular Disease is the Leading Cause of Death in Diabetes



Stroke and Heart Attack

SPOT A STROKE™

F.A.S.T.



FACE Drooping



ARM Weakness



SPEECH Difficulty



TIME to Call 911

- Pain or discomfort in your arms, back, jaw, neck, or stomach
- Shortness of breathing
- Sweating
- Nausea
- Light-headedness



Make sure people with diabetes know the signs and seek immediate help.

People with diabetes may not experience intense chest or jaw pain during heart attack due to neuropathy.

DiaBingo- G

G ADA goal for A1c is less than ____%

G Blood pressure goal is less than

G People with DM should see eye doctor (ophthalmologist) at least

G The goal for blood sugars 1-2 hours after a meal is less than:

G People with DM should get this shot every year

G People with DM need to get these kidney tests yearly

G Periodontal disease indicates increased risk for heart disease

G The goal for blood sugar levels before meals is:

G The activity goal is to do ___ minutes on most days

G Name 3 healthy foods to include in daily meal plan

Self Reflective Question

- ▶ A individual is admitted and tells you they are only taking their daily insulin injection about 4 times a week.
- ▶ What feelings would that evoke?
 - ▶ Patient doesn't care
 - ▶ Non-compliant
 - ▶ Lazy
 - ▶ Better scare them
 - ▶ Exasperation
 - ▶ Other feeling

curiosity

Language of Diabetes Education

Old Way

- ▶ Control diabetes
- ▶ Test BG
- ▶ Patient
- ▶ Normal BG
- ▶ Non-adherent, compliant
- ▶ Refuse

New Way

- ▶ Manage
- ▶ Check
- ▶ Participant
- ▶ BG in target range
- ▶ Focus on what they are accomplishing
- ▶ Decided, chose

Language of Diabetes Education

Old Way

- ▶ Can't, shouldn't, don't, have to
- ▶ Regimen
- ▶ Refused
- ▶ Victim, suffer, stricken

New Way

- ▶ Have you tried..."
- ▶ What about..."
- ▶ May I make a suggestion..."

- ▶ Plan, choices
- ▶ Declined, Chose not to
- ▶ ..lives with diabetes
- ▶ ...has diabetes

American Diabetes Association, Diabetes Care
The Use of Language in Diabetes Care and Education, 2017

Life Study – Mrs. Jones

Mrs. Jones is 62 years old, with a BMI of 36 and complains of feeling tired and urinating several times a night. She has an urinary tract infection. Her A1c is 8.3%, glucose 237.

She is hypertensive with a history of gestational diabetes. No ketones in urine.

- ▶ What are her risk factors and signs of diabetes?
- ▶ You find a few moments to teach and she asks you some questions.



Mrs. Jones asks you What Do You Say?

- ▶ What is diabetes?
- ▶ They say I am a diabetic because I am obese?
- ▶ How am I going to control this?
- ▶ What is a normal blood sugar?
- ▶ Do I have to test my blood sugars?
- ▶ My doctor told me to stay away from white foods. Is that true?



Mrs. Jones asks you What Do You Say?

- ▶ You are wondering if your weight caused your **diabetes**?
- ▶ You can **manage your diabetes** and improve your health at the same time.
- ▶ **For people without diabetes**, fasting blood sugar is less than 100 and A1c is less than 5.7%
- ▶ **Checking** blood sugars can help you figure out if the plan is working.

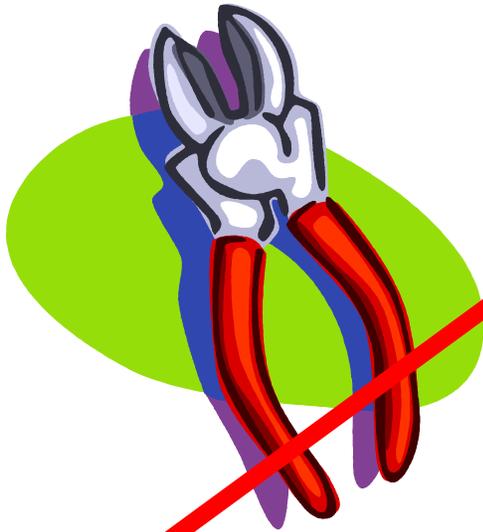


Lower Extremities

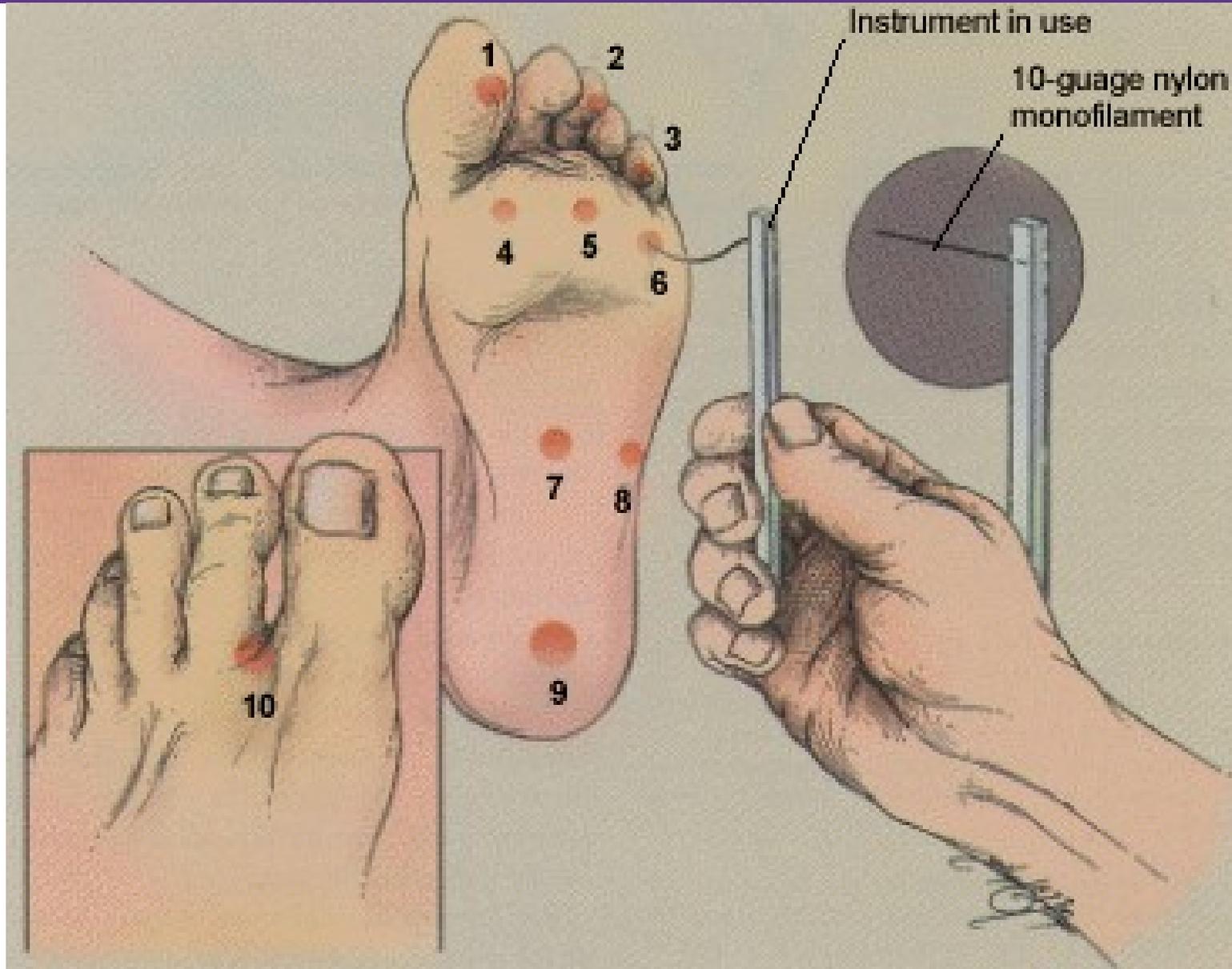
- ▶ Lift the Sheets and Look at the Feet



No Bathroom Surgery



5.07 monofilament = 10gms linear pressure



Three Most Important Foot Care Tips



Inspect and apply lotion to your feet every night before you go to bed.



Do NOT go barefoot, even in your house. Always wear shoes!

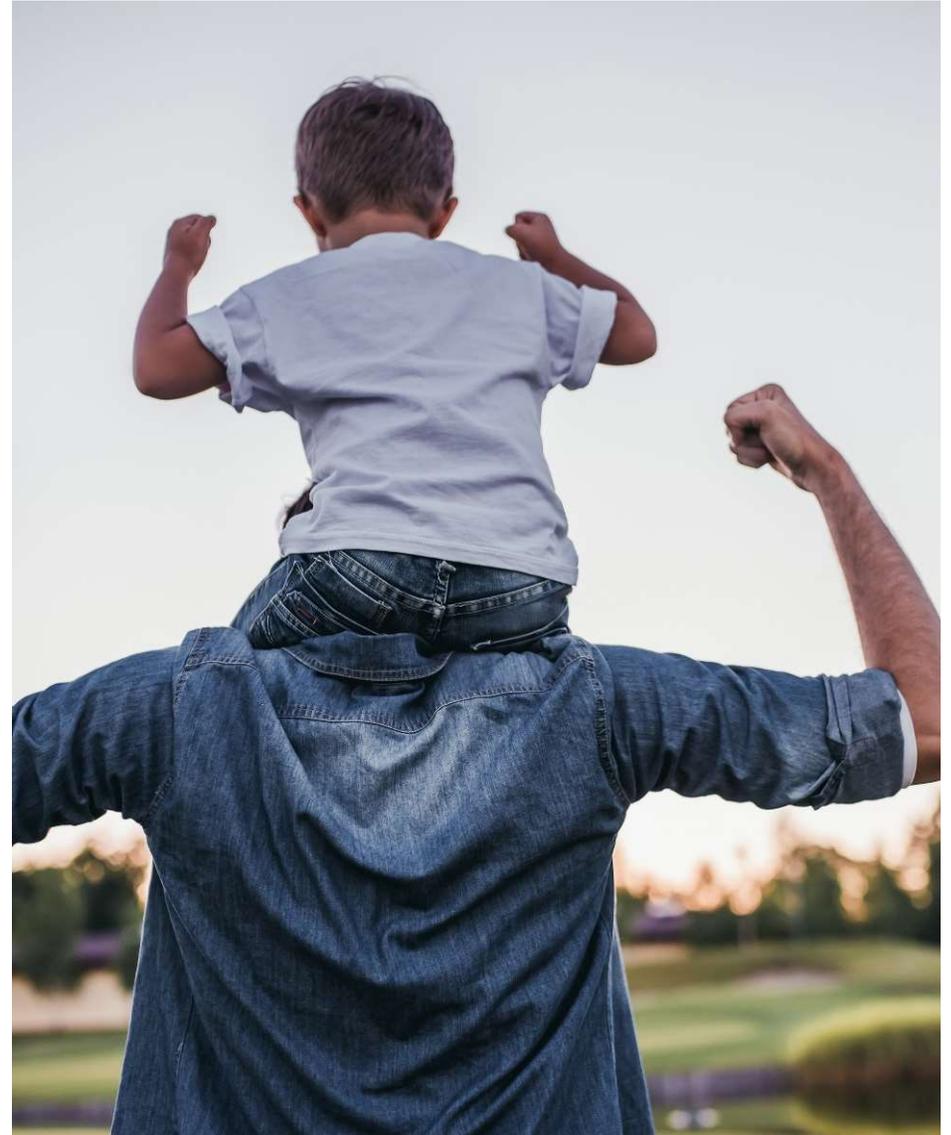


Every time you see your provider, take off your shoes and show your feet.



Let's Be Health Warriors

- ▶ Every day actions make a big difference
- ▶ Protect against health issues and improve outcomes if you do have an event.
- ▶ Keep strong.



Good Exercise Info



- ▶ **“Passagiata” – take an after meal stroll**
- ▶ Exercise decreases A1c 0.7%
- ▶ No change in body wt, but 48% loss in visceral fat
 - ▶ ADA PostGrad 2010

“Every minute of activity lowers blood sugar one point.”

“I don’t have time to exercise, I MAKE time.” Mike Huckabee

Financial Advisor

- ▶ Mid 30s, friendly, he smiles to greet you and you notice his gums are inflamed. He tells you he has prediabetes and is worried that he might have diabetes soon,
- ▶ If you could give him some health-related suggestions, what would they be?



Your teeth need extra special attention

- ▶ Goal: Brush teeth at least twice daily and floss at least once daily.
- ▶ See dentist at least yearly.
- ▶ Teeth cleaning twice a year.



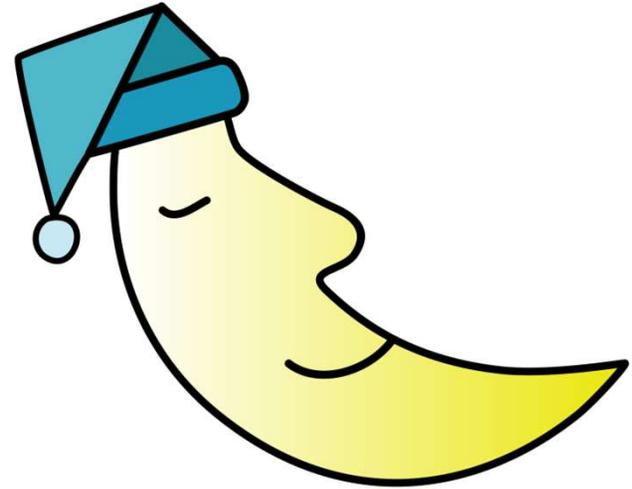
Ditch the Nicotine Stick

- ▶ Goal: Quit Smoking (vaping) and Don't Start



Be a Sleep Warrior

- ▶ Make time for sleep
- ▶ Restorative
- ▶ Decreases hunger
- ▶ Lowers Blood Sugar
- ▶ Improves ability to cope



Goal: Get at least 7 hours of sleep a night.

You deserve it.

Best Shake For People with Diabetes



**“The only diet shake I recommend is the shake
your booty makes when you exercise.”**

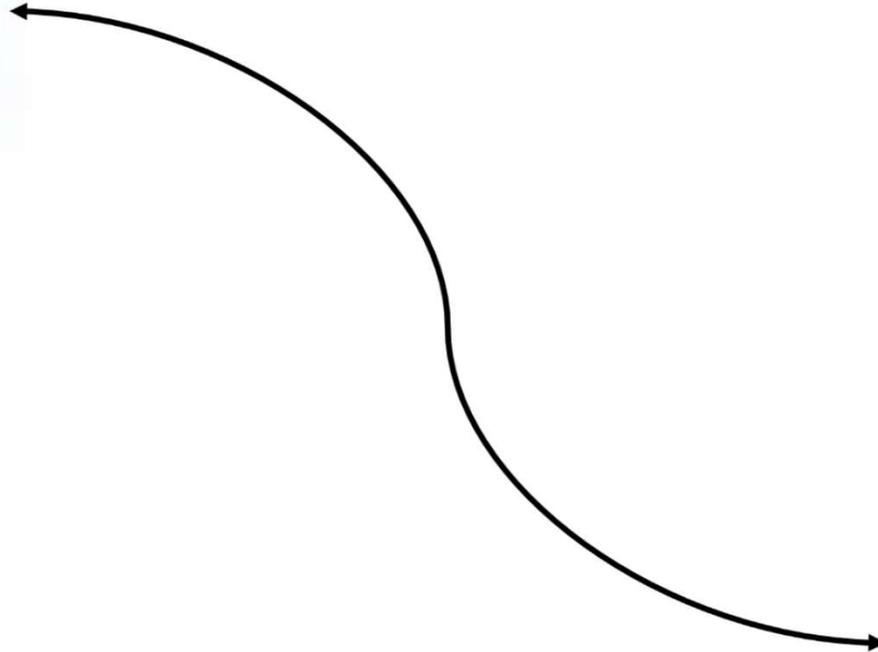
From Debbie Nagata's slide collection

Keep Active

- ▶ Goal: Work toward 30 minutes of activity a day plus strengthening exercises twice a week.
- ▶ Don't forget balance too (Tai Chi, Yoga).



Where are you on this continuum?



A hard truth

- ▶ Exercise alone doesn't cause weight loss
- ▶ But....
 - ▶ It helps keep weight off
 - ▶ Decreases visceral fat
 - ▶ Decreases CV Risk
- ▶ To combat obesity, we need to change the food environment
- ▶ “You cannot outrun a bad diet”

IT TAKES 524 BURPEES

TO BURN OFF 1 LARGE FRIES

BURPEES SUCK, SO CHOOSE WISELY!

@IG.HEALTH



Exercise benefits

- ▶ Sleep better.
- ▶ Less diabetes kidney disease, retinopathy
- ▶ Improved mood and vitality
- ▶ Improved sexual health
- ▶ Less urinary incontinence
- ▶ Better Knee health
- ▶ Less need for medications
- ▶ Decreased health care costs



Meds for Type 2 – Sulfonylureas and Metformin

▶ Sulfonylureas

- ▶ Glipizide
- ▶ Glyburide
- ▶ Glimepiride (Amaryl)
- ▶ Lower A1C 1-2%
- ▶ Cheap (\$4 month)
- ▶ Cause low blood sugar/
weight gain

▶ Metformin

- ▶ Lowers A1C 1-2% points
- ▶ Cheap (\$4 a month)
- ▶ Lowers LDL cholesterol
- ▶ Take with meals
- ▶ Use extended release to prevent nausea
- ▶ Does not harm kidneys
- ▶ Don't take if GFR less than 30

Meds – DPP-IV's and Actos

▶ DPP-IV's:

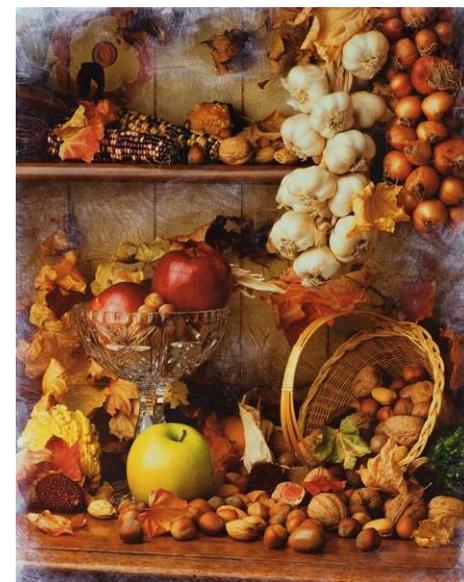
Januvia, Onglyza,
Tradjenta, Nesina

- ▶ Lower A1C 0.6% -1.5
- ▶ Expensive \$600 /mo
- ▶ No low blood sugar or weight gain.
- ▶ Can cause joint pain (rare)

▶ TZD - Actos

- ▶ Actos cost \$35 a month
- ▶ Lower A1C by ~1.0%
- ▶ Can cause fluid weight gain
- ▶ Not for people with heart failure
- ▶ Actos is recommended post-stroke and for those with fatty liver

Move toward the Tomato



Immediately Improve Your Health Eat Less Junk Food & Sugary Drinks –

- ▶ Less Processed Foods
- ▶ Less Sugary Beverages
 - ▶ increase visceral adiposity
 - ▶ With sugar or
 - ▶ High fructose corn syrup



Average American Consumes 25 teaspoons of sugar a day (400 cals)

- ▶ One soda has 12 teaspoons sugar
- ▶ ADA guidelines “limit sodas and beverages with sugar, High Fructose Corn Syrup, (HFCS)
- ▶ Goal- 6 teaspoons of sugar a day



Your health can only get better

The Joy of Six

1 2 3 4 5 6

Pledge to get the word out about sugar

TAKE THE PLEDGE

The graphic consists of six stylized hands of different colors (red, purple, orange, red) arranged in a row. Each hand has a white circle with a number inside. To the right of the hands is a red rectangular button with the text 'TAKE THE PLEDGE' in white. Above the button is the text 'Pledge to get the word out about sugar' in a cursive font. The entire graphic is enclosed in a thin red border.

Fiber – the New “F” Word



- ▶ **Goal:**
 - ▶ 14 gms / 1000 calories ~ 30 gms a day
- ▶ **How?**
 - ▶ Whole, intact grains, beans, fruits, veggies, nuts, avocados
- ▶ **Why?**
 - ▶ Associated with lower mortality for people with type 2.
 - ▶ Fiber intake inversely associated with type 2 diabetes
- ▶ **Avoid highly processed foods**
 - ▶ If label says 0-2gms of fiber per serving, low fiber food.

Nutrition Facts

▼ 99% Fat Free Vegetarian
Chili with Beans

Serving Size 1.00 cup(247g)
Serving Per Container about 2

Amount Per Serving		
Calories		190
Calories from Fat		10
		%DV
Total Fat	1g	2%
Saturated Fat	0g	0%
Trans Fat	0g	
Cholesterol	0mg	0%
Sodium	780mg	33%
Total Carbohydrate	35g	12%
Dietary Fiber	10g	40%
Sugars	6g	
Protein	11g	
Vitamin A 25%		Vitamin C 0%
Calcium 6%		Iron 15%

*Percentage Daily values are based on a 2,000 calorie diet. Your Daily values may be higher or lower depending on your calorie needs.

Limit refined carbs and added sugars Instead eat more HIGH Fiber foods:

- High fiber carbs loaded with vitamins, minerals and phytonutrients
- 25+ gms of fiber a day
- Power Carbs include:
 - Beans
 - Veggies
 - Fruits
 - Whole grain foods



Associated with decrease in all cause mortality

Improves microbial diversity

Super Foods

Found in the pigments, chemicals, and fiber of plants

Sources include:

- Greens: Kale, spinach, bok choy
- Deep orange fruit and veggies: carrots, winter squash, apricots, sweet potatoes
- Red and purple fruits and veggies: berries, beets, plums, red grapes and red peppers
- Nuts, onions, citrus, cruciferous vegetables, dark chocolate!



Colors	Foods	Colorful Protective Substances and Possible Actions
Red	Tomato and tomato products, watermelon, guava	Lycopene: antioxidant, cuts prostate cancer risk
Orange	Carrot, yam, sweet potato, mango, pumpkin	Beta-carotene: supports immune system; powerful antioxidant
Yellow-orange	Citrus fruits—orange, lemon, grapefruit, papaya, peach	Vitamin C, flavonoids: inhibit tumor cell growth, detoxify harmful substances
Green	Spinach, kale, collard, and other greens	Folate: builds healthy cells and genetic material
Green-white	Broccoli, brussels sprouts, cabbage, cauliflower	Indoles, lutein: eliminate excess estrogen and carcinogens
White-green	Garlic, onion, chive, asparagus	Allyl sulfides: destroy cancer cells, reduce cell division, support immune system
Blue	Blueberries, purple grapes, plums	Anthocyanins: destroy free radicals
Red-purple	Grapes, berries, plums	Reservatrol: may decrease estrogen production
Brown	Whole grains, legumes	Fiber: carcinogen removal

10 Super Foods

- ▶ Beans
- ▶ Dark Green Leafy Veggies
- ▶ Citrus Fruit
- ▶ Sweet Potatoes
- ▶ Berries
- ▶ Tomatoes
- ▶ Fish High in Omega-3 Fatty Acids
- ▶ Whole Grains
- ▶ Nuts
- ▶ Fat-Free Milk and Yogurt



USDA Food Pyramid

www.myplate.gov

Balancing Calories

- ▶ Enjoy your food, but eat less.
- ▶ Avoid oversized portions.

Foods to Increase

- ▶ Make half your plate fruits and vegetables.
- ▶ Make at least half your grains whole grains.
- ▶ Switch to fat-free or low-fat (1%) milk.

Foods to Reduce

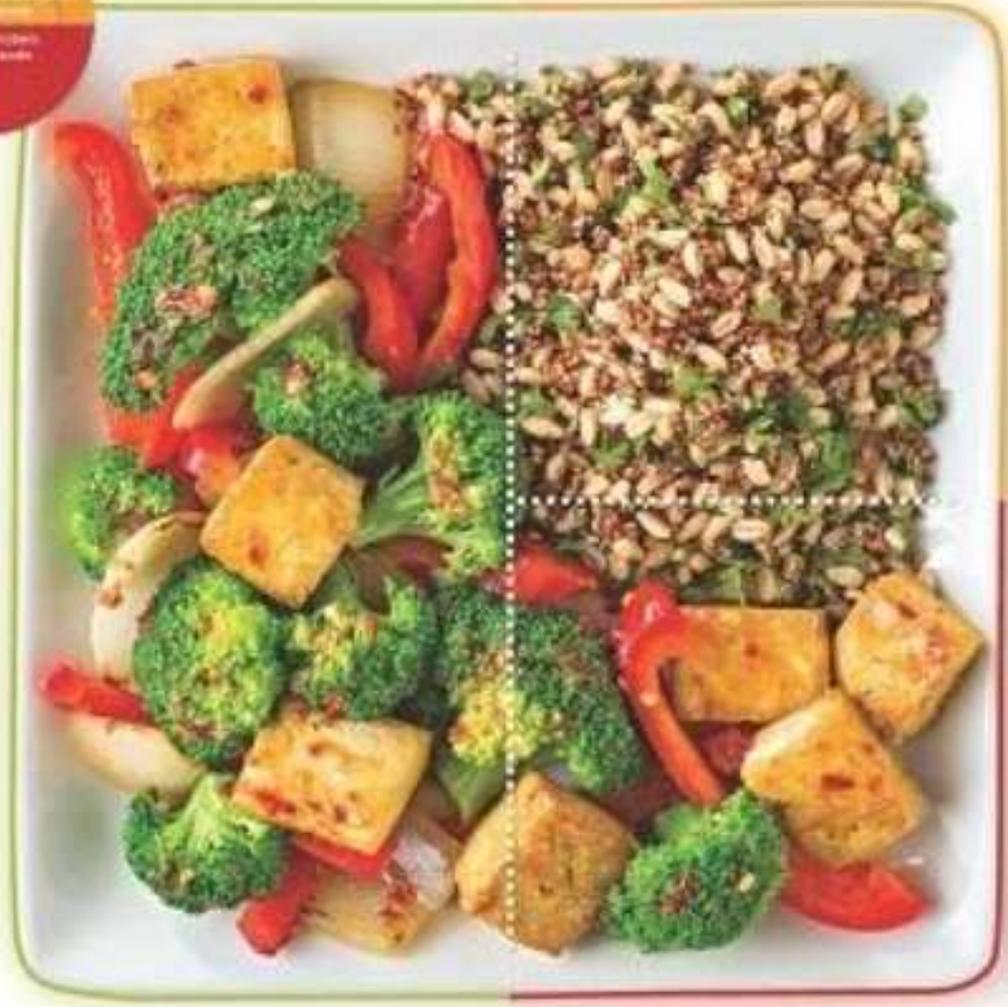
- ▶ Compare sodium in foods like soup, bread, and frozen meals — and choose the foods with lower numbers.
- Drink water instead of sugary drinks.



Plan Your Portions



Plan Your Portions



- Asparagus
- Broccoli
- Bok choy
- Cabbage
- Cauliflower
- Cucumbers
- Dark leafy greens
- Eggplant
- Mushrooms
- Onions
- Peas
- Spinach
- Tomatoes
- Zucchini



Water or no-calorie drinks

- Corn
- Green beans
- Fruit
- Beans
- Whole grains
- Whole grains
- Beans, lentils and peas
- Milk and yogurt
- Cheese
- Eggs
- Soft breads
- Nuts
- Tofu
- Tofu

Use a smaller plate. This is a 9-inch plate to help guide you

9 inches

Handy Meal Plan

- ▶ Per Meal Serving
 - ▶ Each finger = 15 gms carb (can have 3-4 servings/meal)
 - ▶ Palm of hand = 3 oz's protein
 - ▶ Thumbnail = 1 tsp fat serving



Enjoy the Ultimate Beverage – H₂O

- ▶ Goal: Keep hydrated by enjoying plenty of water



Goals for Diabetes

- ▶ **A1C** – less than 7%
 - Premeal sugar target is 80-130
 - 1-2 hours after a meal, less than 180
- ▶ **Blood Pressure** – less than 130/80
- ▶ **Cholesterol** – If over 40, cholesterol medication + diet and exercise recommended
 - LDL (lousy) cholesterol target less than 70 if at high risk
 - LDL cholesterol target less than 55 if had heart attack or stroke
- ▶ **Drugs** – Know the medications you are taking, keep updated list on phone or paper and
- ▶ **Eyes** – Get checked yearly, report any vision changes
- ▶ **Feet** – Check them daily, and if you notice and sores or infection, let your provider know
- ▶ **Food** - Healthy eating, more fiber, vegetables, beans, whole grains, fruits. Meet with dietitian.
- ▶ **Kidneys** – Check for kidney health annually by knowing your:
 - GFR (goal is more than 60) and
 - UACR (urine test) with goal of less than 30 mg/gm.

Collaborate with Health Care Team

Learn about diabetes

Be familiar with your health /labs

Ask what action you can take to improve your health

Referrals as needed

Your interest increases engagement

- ▶ Keep an eye on the ABC's of your diabetes.



Diabetes Bingo

“DiaBingo” Shout out Right Answer



DiaBingo - N

N DPP demonstrated that exercise and diet reduced risk of DM by__%

N Average A1c of 7% = Avg BG of _____

N An _____a day can help prevent heart attack and stroke

N Scare tactics are effective at motivating behavior

N Losing ____ % of body weight, can improve blood glucose, BP, lipids

N Drugs that can cause hyperglycemia

N 2/3 cups of rice equals _____ serving carbohydrate

N One % drop in A1c reduces risk of complications by ____ %

N 1 gm of fat equal _____kilo/calories

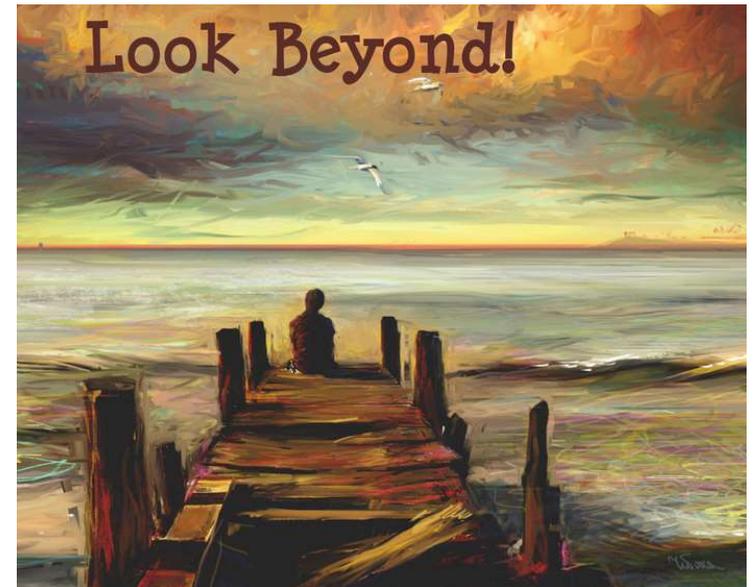
N Metabolic syndrome = hyperinsulinemia, hyperlipidemia, hypertension

N Average American consumes 15 teaspoons of sugar a day.

N Medication that was derived from the saliva of the Gila Monster

Look Beyond Diabetes

- ▶ ACE – Adverse Childhood Experiences
- ▶ Feelings around their diabetes
- ▶ Cultural traditions, family system.
- ▶ Social, religious and employment influences
- ▶ Personal factors: attitudes, cognitive factors, literacy, learning styles, health beliefs
- ▶ Depression, anxiety
- ▶ Mental illness
- ▶ Addiction issues



Look Beyond – What impacts DSM

- ▶ Improving diabetes treatment outcomes requires looking at multiple factors:
 - ▶ Living situation
 - ▶ Adequacy of medical management
 - ▶ Duration of diabetes
 - ▶ Weight gain / weight loss
 - ▶ Other health related problems
 - ▶ Social structural factors
 - ▶ Childhood trauma – Adverse Childhood Experiences



Question - What is ACE?

- ▶ ACE =
 - ▶ Adverse
 - ▶ Childhood
 - ▶ Experiences
 - ▶ (before 18 yrs)

- ▶ What is the relationship between childhood trauma, diabetes and health?



www.AcesAware.org

10 Assessment Areas for ACE – Use 10 Question Screening Tool to Assess

ABUSE



Physical



Emotional



Sexual

NEGLECT



Physical

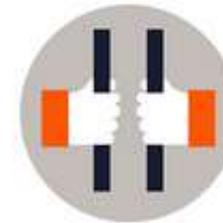


Emotional

HOUSEHOLD DYSFUNCTION



Mental Illness



Incarcerated Relative



Mother treated violently



Substance Abuse



Divorce

<https://www.npr.org/sections/health-shots/2015/03/02/387007941/take-the-ace-quiz-and-learn-what-it-does-and-doesnt-mean>

ACE increases risk for 9 out of 10 leading causes of death in US

Leading Cause of Death	Odds Ratio with ≥ 4 ACEs
▶ Heart Disease	▶ 2.1
▶ Stroke	▶ 2.0
▶ Diabetes	▶ 1.4
▶ Kidney Disease	▶ 1.7
▶ Cancer	▶ 2.3
▶ Alzheimer's	▶ 4.2
▶ Suicide(attempts)	▶ 37.5

3 Realms of ACEs

Adverse childhood and community experiences (ACEs) can occur in the household, the community, or in the environment and cause toxic stress. Left unaddressed, toxic stress from ACEs harms children and families, organizations, systems and communities, and reduces the ability of individuals and entities to respond to stressful events with resiliency. Research has shown that there are many ways to reduce and heal from toxic stress and build healthy, caring communities.



The Act of Recognition is Healing



**When we provide
trauma informed
care, we give voice
to the unheard.**

**There is hope for
healing.**

**We are part of
breaking the cycle.**

~ Coach Beverly

Helping with Healing

**How do you
manage
your triggers?**

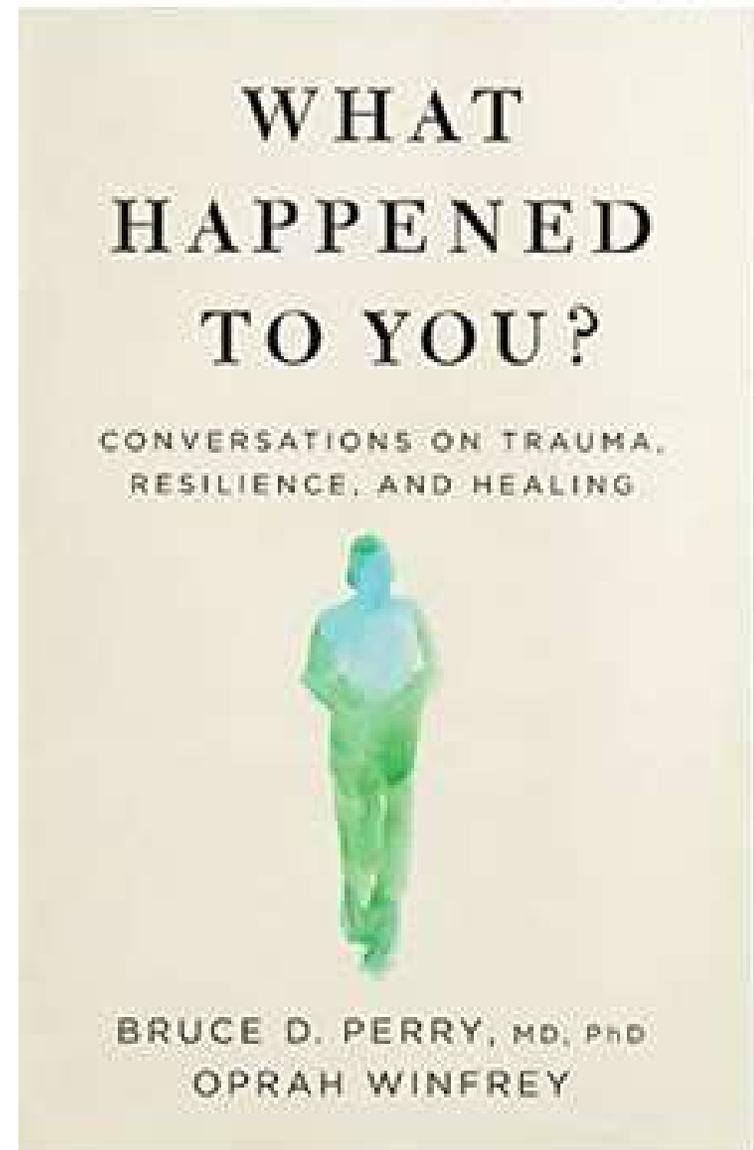


**How can you
show yourself the
same compassion
you show others?**



Quotes from “What Happened to You?”

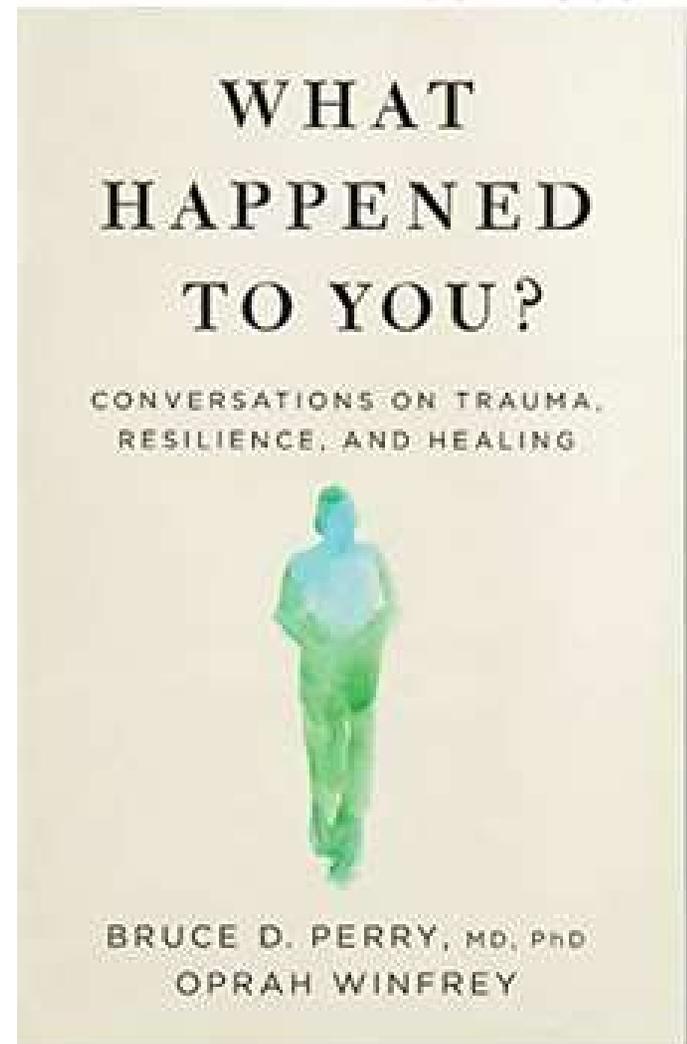
- ▶ The lesson is that no matter what has happened, you get a chance to rewrite the script.
(You are not your number.)
- ▶ I wouldn't be who I am without my trauma, so I own it.
- ▶ I use my trauma in service to others - empathy, compassion and forgiveness.



Quotes from “What Happened to You?”

All of us who have been broken and scarred by trauma have the chance to turn those experiences into post-traumatic wisdom.

Forgive yourself, forgive them. Step out of your history and into the path of your future.



Remember by Joy Harjo – Poet Laureate

- ▶ Remember the earth whose skin you are:
red earth, black earth, yellow earth, white
earth, brown earth, we are earth.
- ▶ Remember the plants, trees, animal life who
all have their tribes, their families, their
histories, too. Talk to them,
listen to them. They are alive poems.
- ▶ Remember the wind. Remember her voice.
She knows the origin of this universe.
- ▶ Remember you are all people and all people
are you.
Remember you are this universe and this
universe is you.
Remember all is in motion, is growing, is you.
Remember language comes from this.
Remember the dance language is, that life is.
Remember.



We are all connected

Keep Connected with friends and family who love you just the way you are!

- ▶ Goal: Self-care is important



Take moment to enjoy nature and find enchantment

- ▶ Goal: Step into nature daily. Moments of Awe



GREAT DREAM

Ten keys to happier living

Action for Happiness has developed the 10 Keys to Happier Living based on a review of the latest scientific research relating to happiness.

Everyone's path to happiness is different, but the research suggests these ten things consistently tend to have a positive impact on people's overall happiness and well-being.

The first five relate to how we interact with the **outside** world in our daily activities. The second five come more from **inside** us and depend on our attitude to life.

GIVING



Do things for others

RELATING



Connect with people

EXERCISING



Take care of your body

APPRECIATING



Notice the world around

TRYING OUT



Keep learning new things

DIRECTION



Have goals to look forward to

RESILIENCE



Find ways to bounce back

EMOTION



Take a positive approach

ACCEPTANCE



Be comfortable with who you are

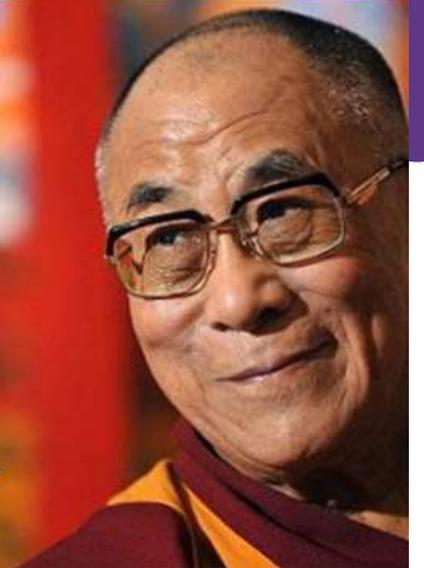
MEANING



Be part of something bigger

HAPPINESS
is not
something
ready made.
It comes
from your
own actions.

~Dalai Lama



“ People will forget what you said, people will forget what you did, but people will never forget how you made them feel ” ~ Maya Angelou

Actionforhappiness.org

Thank You – We DID IT



- ▶ Questions? Please email info@diabetesed.net
- ▶ Website www.DiabetesEd.net

