

Welcome to Boot Camp 6 – Medical Nutrition Therapy 2025

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Founder: Nutrition for Daily Living

We are Here to Help!



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If you have questions, you can chat with us at www.DiabetesEd.net
or call 530 / 893-8635 or email at info@diabetesed.net

Diabetes Education Services Inclusion Statement

Based on the IDEA Initiative inspired by CDR

- ▶ Inclusion
- ▶ Diversity
- ▶ Equity
- ▶ Access



- ▶ We are committed to promoting diversity and inclusion in our educational offerings.
- ▶ We recognize, respect, and include differences in ability, age, culture, ethnicity, gender, gender identity, sexual orientation, size, and socioeconomic characteristics.
- ▶ Our goal is to promote equity and access, acknowledging historical and institutional inequities.
- ▶ We are committed to practicing cultural humility and cultivating our cultural competence.
- ▶ We wish to create a safe space within our community where one's beliefs, experiences, identity, and differences in ability, age, size, socio-cultural/socioeconomic characteristics, and political affiliations are considered and respected.

Christine Craig, MS, RDN, CDCES has No Relevant Conflicts of Interest

- ▶ Information is based on:
 - ▶ The ADA Standards of Care in Diabetes

Christine is the Founder of Nutrition for Daily Living, where her mission to increase access to compassionate and evidenced-based nutrition and diabetes care.

She authors a very popular monthly blog and question of the week for our company.

Her experience is vast and includes providing diabetes care within Primary, Telemedicine and Endocrinology clinics.

Boot Camp Class 6:

Medical Nutrition Therapy

Objectives:

1. Discuss national guidelines for Medical Nutrition Therapy
2. State different meal planning approaches
3. Describe gastrointestinal issues associated with diabetes
4. Discuss approaches to discussing and supporting weight loss



Main References

STANDARDS OF CARE | DECEMBER 09 2024

5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes—2025 FREE

American Diabetes Association Professional Practice Committee

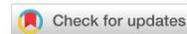
Nutrition Therapy for Adults With Diabetes or Prediabetes: A Consensus Report

Alison B. Evert¹, Michelle Dennison², Christopher D. Gardner³, W. Timothy Garvey^{4,5}, Ka Hei Karen Lau⁶, Janice MacLeod⁷, Joanna Mitri⁸, Raquel F. Pereira⁹, Kelly Rawlings¹⁰, Shamera Robinson¹¹, Laura Saslow¹², Sacha Uelmen¹¹, Patricia B. Urbanski¹³ and William S. Yancy Jr.^{14,15}†

+ Author Affiliations

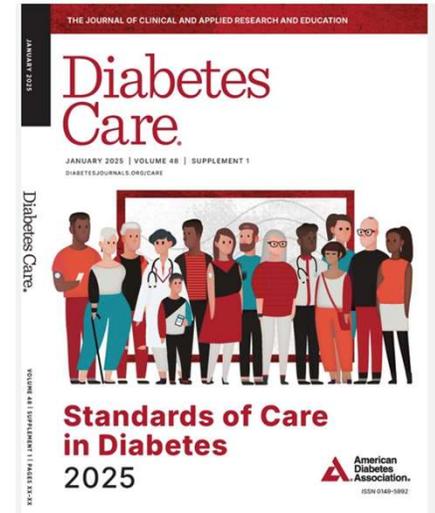
Corresponding author: William S. Yancy Jr., will.yancy@duke.edu

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<https://doi.org/10.2337/dci19-0014>



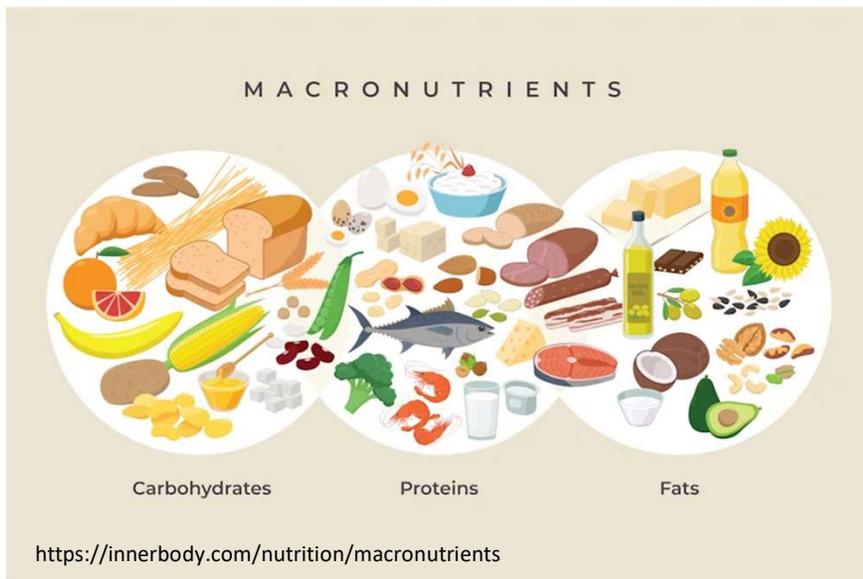
<https://care.diabetesjournals.org/content/42/5/731.full-text.pdf>

[Diabetes Exchange List](#) » a brief summary of serving size and carbohydrate counts for common foods. Excellent study tool for the exam.



ADA Standards 2025 – Section 5

“People eat food, not nutrients, nutrient recommendations need to be applied to **WHAT** people eat”



Medical Nutrition Therapy – ADA

Macronutrient Distribution

“No one-sized-fits-all eating pattern for individuals with diabetes”

- ▶ no ideal percent of calories from protein, carbohydrate & fat
- ▶ Macronutrient distribution based on ***individualized assessment***
- ▶ **Consider personal preferences**
 - ▶ tradition, culture, religion, health beliefs & goals, economics
 - ▶ metabolic goals & comorbidities



Healthcare team members should complement MNT, providing guidance on healthy food choices for the individual and behavioral support

Goals of Medical Nutrition Therapy – ADA

Promote and support *Individualized* healthful eating patterns

1. Support healthful eating patterns

- Emphasize eating a variety of nutrient dense foods in appropriate portions to:
 - Attain individualized BP, glycemic and lipid goals
 - Attain & maintain body wt goals
 - Delay &/or prevent complications

2. Individualize nutrition care based on:

- Personal & cultural preferences
- Health literacy & numeracy
- Access to healthful foods
- Willingness & ability to make behavioral changes
- Barriers to Change

3. Maintain pleasure of eating.

Provide positive, nonjudgmental messages about food

- Limit food choices only when backed by science

4. Provide practical tools for developing healthful eating patterns

STANDARDS OF CARE | DECEMBER 09 2024

5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes—2025 FREE

American Diabetes Association Professional Practice Committee

Poll Question 1

Based on the 2025 ADA Standards of Care on nutrition therapy, which statement is most accurate?

- A. MNT provided by a RD/RDN is associated with an A1c decrease of 0.3 to 2.0%.
- B. A low carbohydrate, high protein diet is associated with increased risk of renal failure.
- C. With new type 2 diabetes, try to achieve A1c targets with MNT for 3 months then advancing to medication therapy.
- D. People with diabetes and hypertension have improved outcomes when they decrease sodium intake to less than 1,500 mg a day.



ADA or ADCES Recognized Program

DSME & Medical Nutrition Therapy – What Medicare Covers

MNT

- ▶ 3 hours initial benefit in first calendar year
- ▶ 2 hours follow-up annually
- ▶ Billing Codes:
 - ▶ 97802- Initial
 - ▶ 97803- Follow-up



DSMES

- ▶ 10 hours initial benefit
 - ▶ 1 hour individual assess
 - ▶ 9 hours group (once in a lifetime)
- ▶ 2 hours follow-up annually (starts on Month 13 after first DSMES Bill)
- ▶ Billing Codes
 - ▶ G0108- 1:1
 - ▶ G0109 – Group (2-20 people)

Meeting with a RD can result in
a 0.3-2% drop in A1C

Keep it Person Centered

An individualized eating pattern & plan

- ▶ considers health status, skills, literacy, resources and environment
- ▶ Addresses individual nutrition needs based on:
personal & cultural **preferences, access to food, willingness and barriers**



*Long-term support
needed from
diabetes care team*

Poll Question 2

MB has newly diagnosed type 2 diabetes. BMI is 31, waist circumference is 41 and A1c is 7.3%. They want to learn how to adjust eating habits to help lower BG. Where would you start?

- A. Focus on the importance of counting carbs.
- B. Gently encourage avoiding junk food and sugary drinks
- C. Provide information for an ADA diabetic diet
- D. Ask about usual eating habits



Healthy Eating Patterns/Approaches

Eating Patterns:

Total Foods Consumed

- ▶ Mediterranean Diet
- ▶ Plant based eating
- ▶ DASH (Dietary Approaches to Stop Hypertension)
- ▶ Low Carbohydrate

Eating Approach:

Tools for developing an eating pattern

- ▶ Diabetes Plate Method
- ▶ Carbohydrate Counting
- ▶ Individualized behavioral approaches



Eating Patterns: Key Nutrition Principles

Until there is more evidence:

- ▶ Emphasize non-starchy vegetables in a rainbow of colors
- ▶ “Power carbs”: fruit, legumes, whole grains, nuts & seeds, lean proteins, low-fat dairy
- ▶ Minimize red meat, added sugars, sugary beverages, refined grains & ultra-processed foods



Any approach should consider:

Individual needs: “health status, personal & cultural preferences, ability to sustain recommendations, food access & nutrition security”

Assess for Food Insecurity

- ▶ Any member of the health care team can screen for food insecurity using **The Hunger Vital Sign**.
- ▶ Households are considered at risk if they answer either or both of the following statements as “often true” or “sometimes true”

<https://childrenshealthwatch.org/public-policy/hunger-vital-sign/>



- ▶ “Within the past 12 months, we worried whether our food would run out before we got money to buy more.”
- ▶ “Within the past 12 months, the food we bought just didn’t last, and we didn’t have money to get more.”

Healthy Lower Cost Foods

- ▶ Beans
- ▶ Lentils
- ▶ Frozen vegetable and fruits
- ▶ Canned veggies and fruit
- ▶ Milk
- ▶ Yogurt tubs
- ▶ Oatmeal
- ▶ Corn tortillas
- ▶ Salsa
- ▶ Fruits & Veggies in season
- ▶ Brown rice
- ▶ Pasta/ sauce
- ▶ Peanut butter
- ▶ Canned tuna
- ▶ Soups – homemade or canned
- ▶ Chili



Fiber – the New “F” Word

- ▶ Goal: minimum
 - ▶ 14 gms / 1000 calories, ~ 30 gms a day
- ▶ How?
 - ▶ Avoid highly processed foods
 - ▶ Choose > 3 gm fiber per serving
 - ▶ Foods: Whole intact grains, legumes, fruits, veggies, nuts/seeds, avocados
- ▶ Why?
 - ▶ Lower all cause mortality
 - ▶ Reduced risk of T2DM
 - ▶ Increased microbiome diversity

Nutrition Facts

Serving Size 1 cup (236g)
Servings Per Container about 2

Amount Per Serving

Calories 260 Calories from Fat 130

% Daily Value*

Total Fat 14g **22%**

Saturated Fat 5g **25%**

Trans Fat 0g

Cholesterol 35mg **12%**

Sodium 990mg **41%**

Total Carbohydrate 19g **6%**

Dietary Fiber 3g **12%**

Sugars 4g

Protein 15g **29%**

Vitamin A 10% • Vitamin C 0%

Calcium 4% • Iron 8%

*Percent Daily Values are based on
a 2,000 calorie diet.

Sodium, Vitamins and Fat

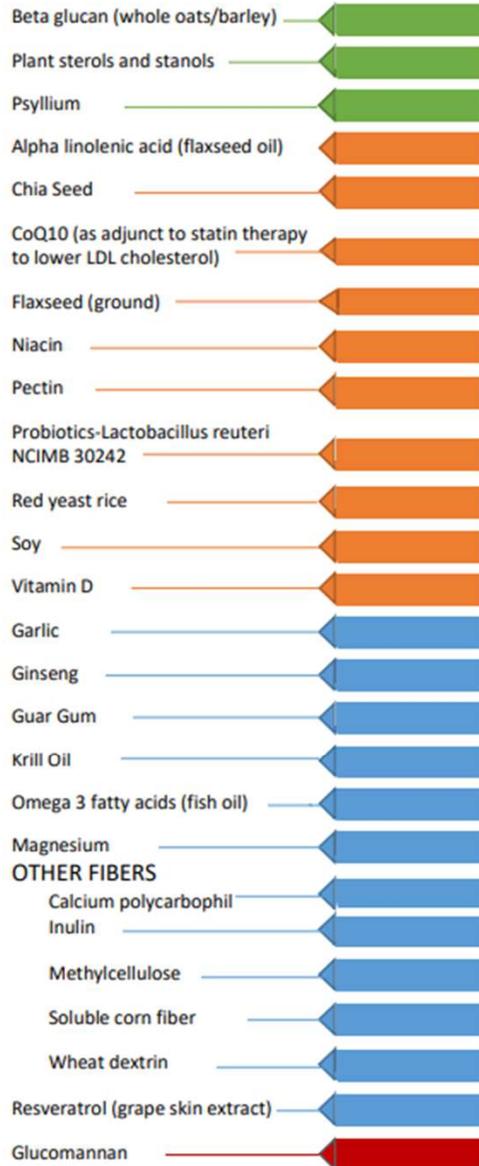
- ▶ Sodium – Limit to less than 2,300 mg a day (one tsp a day)
- ▶ Fat - same rec as general population (DGA)
 - ▶ HOW: limit red meat, full-fat dairy, butter and coconut oil. Choose fatty fish, olive, canola oil.
 - ▶ Mediterranean Diet, outcomes reduced CVD events – basic principles can be applied across patterns.
- ▶ Vitamin and mineral supplements not recommended -lack of evidence.
 - ▶ B12: Using Metformin, consider screening- provide supplementation if level is low



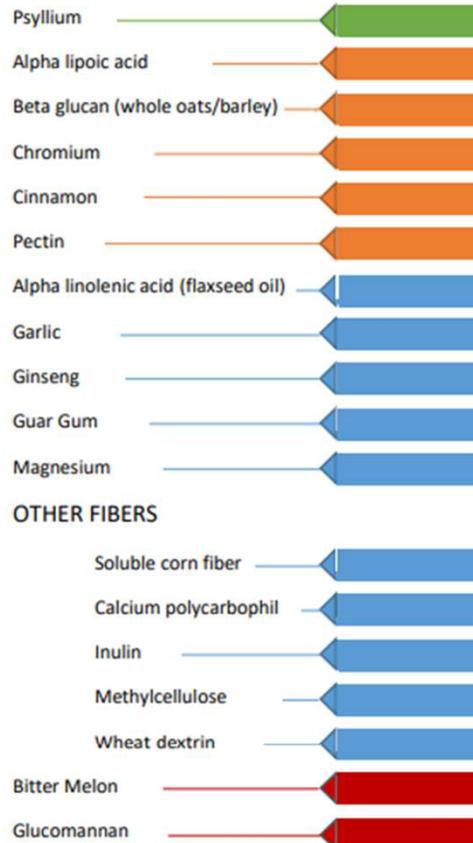
The type of fats consumed is more important than total amount of fat

Supplements CHEAT Sheet

Supplements to Help Manage Total Cholesterol, LDL, and HDL



Supplements to Help Lower Blood Sugar



This downloadable version is compliments of

www.DiabetesEd.net

Supplement Safety Ratings from Cleveland Clinic

Safety Rating Color Key

Recommended: Several well-designed studies in humans have shown positive benefit. Our team is confident about its therapeutic potential.

Recommended with Caution: Preliminary studies suggest some benefit. Future trials are needed before we can make a stronger recommendation.

Not Recommended-Evidence: Our team does not recommend this product because clinical trials to date suggest little to no benefit.

Not Recommended-High Risk: Our team recommends against using this product because clinical trials suggest substantial risk is greater than the benefit.

This content was adapted from The Cleveland Clinic Wellness flyer. For more detailed information, access full supplement review at www.clevelandclinicwellness.com/supp-review

2024

Poll Question 3 - Person Centered

MR eats fast foods for lunch and notices that they have been feeling worse as a result. What response would support sustained behavior change?

- ▶ A. Do you think you could bring a packed lunch a few days a week?
- ▶ B. What about asking for burgers without the bun?
- ▶ C. Could you eliminate sodas?
- ▶ D. What change do you think you could start with?



8. Obesity and Weight Management for Prevention & Treatment of Type 2 Diabetes

- ▶ Use person-first language
- ▶ *Be sensitive, allow for privacy and awareness of weight stigma experiences*
- ▶ Once a year, calculate BMI and assess weight trajectory to inform approach
 - ▶ Active in weight mgmt - weigh every 3 months



Use of BMI

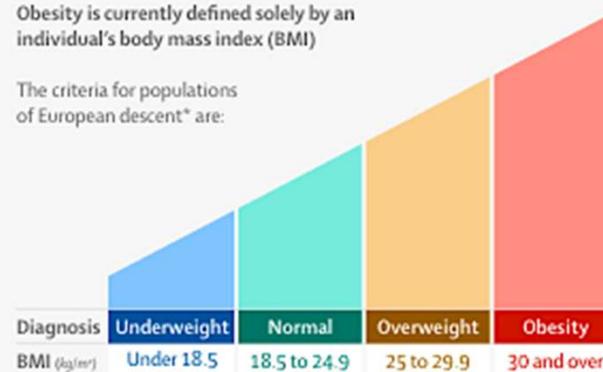
- ▶ WHO defines Obesity as: *abnormal or excessive fat accumulation that presents a risk to health*
- ▶ Dx obesity using :
 - ▶ BMI + distribution measures:
 - ▶ waist circumference, waist:hip, waist:height ratio & associated health consequences



Limitations of the current definition of obesity

Obesity is currently defined solely by an individual's body mass index (BMI)

The criteria for populations of European descent* are:



*Criteria for other ethnic groups are different

✓ Although BMI is **useful** for identifying individuals at increased risk of health consequences...

✗ It **is not** a direct measure of fat

✗ It **does not** establish the distribution of fat around the body

✗ It **cannot** determine when excess body fat is a health problem

Weighing and Respect

- ▶ Regard weight & BMI as sensitive health information
- ▶ Situate scales in a private area/room
- ▶ Measure & report weight nonjudgmentally
- ▶ If weighing is questioned or refused
 - ▶ Be mindful of possible prior stigmatizing experiences
 - ▶ Consider/discuss the value of weight monitoring
 - ▶ Is it needed to inform treatment decisions?



Puhl RM, Himmelstein MS, Speight J. Weight Stigma and Diabetes Stigma: Implications for Weight-Related Health Behaviors in Adults With Type 2 Diabetes.

Clin Diabetes. 2022 Jan;40(1):51-61. doi: 10.2337/cd20-0071.

Health Behavior Change: Shifting Focus

Health at Every Size (HAES) Principles

- ▶ Weight Inclusivity
- ▶ Health Enhancement
- ▶ Eating for Well-being
- ▶ Respectful Care
- ▶ Life-Enhancing Movement

“Lots of people are fat and fit—many avid dancers, runners, lifters, and sports team members are big to start with and stay that way. They tend to be far healthier than thin people who don't move around much or eat a nutritious mix of foods.”

"People might think they can tell who's fit and who's not by looking at them, but in fact, it's trickier than that."

Health at Every Size: The Surprising Truth About Your Weight. Bacon holds a Ph.D. in physiology with a focus on nutrition and weight regulation.

"Health at Every Size is about taking care of your body without worrying about whether you're 'too' big or small."

Weight Loss is Helpful

3-7 % Wt Loss

**Diabetes
Mgmt**

Improves glycemia, BP, Lipids, intermediate CVD risk,
reduce RX, Reduced progression to diabetes



> 7% Wt Loss

**Diabetes
Prevention**

DPP weight loss goal is $\geq 7\%$, associated with
reduced progression to diabetes



> 10% Wt Loss

**Diabetes
Mgmt**

May lead T2DM remission, improved
CVD & metabolic comorbidities &
reduced mortality

Reduces need
for medications



“For individuals with
diabetes &
overweight/obesity any
magnitude of weight
loss may benefit.”

**Optimal goal is healthy weight maintenance:
Continue monitoring & support**

Interested in Weight Loss?

- ▶ Ask Permission
 - ▶ Assess readiness/willingness to engage in changes for weight loss
- ▶ Use non-judgmental language
- ▶ Action-Based Goals
 - ▶ Use shared-decision making for weight-loss goals & intervention strategies
 - ▶ Strategies may include dietary changes, physical activity, behavioral therapy, pharmacologic therapy, medical devices, & metabolic surgery



Poll question 4 – Get your calculator

JJ eats 2 snickers bars a day. Each snickers bar is 215 calories. JJ is committed to losing weight. If JJ stopped eating all snickers bars for two weeks, how much weight would JJ lose?

- a. 1.7 pounds
- b. .86 pounds
- c. 2.4 pounds
- d. 1.7 kgs



How to Achieve Weight Loss?

- ▶ Individualized plan - consider health disparities
- ▶ Intensive interventions = ≥ 16 within 6 months
- ▶ Energy deficit + enhanced activity + behavior therapy
 - ▶ Goal: 500 -750 kcal/day energy deficit
 - ▶ (3,500 kcals = 1 pound)



What is 500 kcals?

1 Large Fry, 1 Double Cheeseburger, 1 King Size Snickers, 1 bagel w/ cream cheese, 4 oz tortilla chips, ~ 3 cans sodas

5 apples, 2 sweet potatoes, 5 eggs, 2 cups of beans, 1 cup almonds

Weight Loss/Maintenance Strategies

- ▶ Weekly self-weighing/tracking
- ▶ Structured programs
- ▶ Increase physical activity
 - ▶ 200-300 minutes/week
- ▶ Alter macronutrients
- ▶ Use meal replacements
- ▶ Eat “healthy” foods
- ▶ Drink Water
- ▶ Get Sleep, Consider Chrononutrition
- ▶ Consider Incretin or metabolic surgery



Metabolic (Bariatric) Surgery

- ▶ Consider for adults with:
 - ▶ BMI >30 (> 27.5 for Asian Americans) who are otherwise good surgical candidates
- ▶ Perform at high volume center with an experienced team
- ▶ Need lifelong medical & behavioral support & monitoring
- ▶ Screen psychological & behavioral health prior to & ongoing
- ▶ Monitor for post surgery hypoglycemia

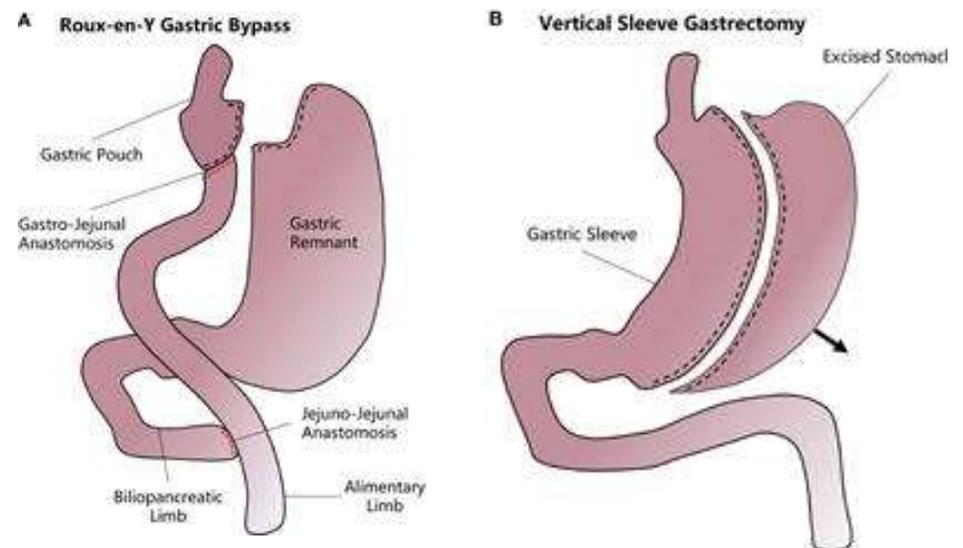


Metabolic Surgery Benefits

More likely to have remission*:

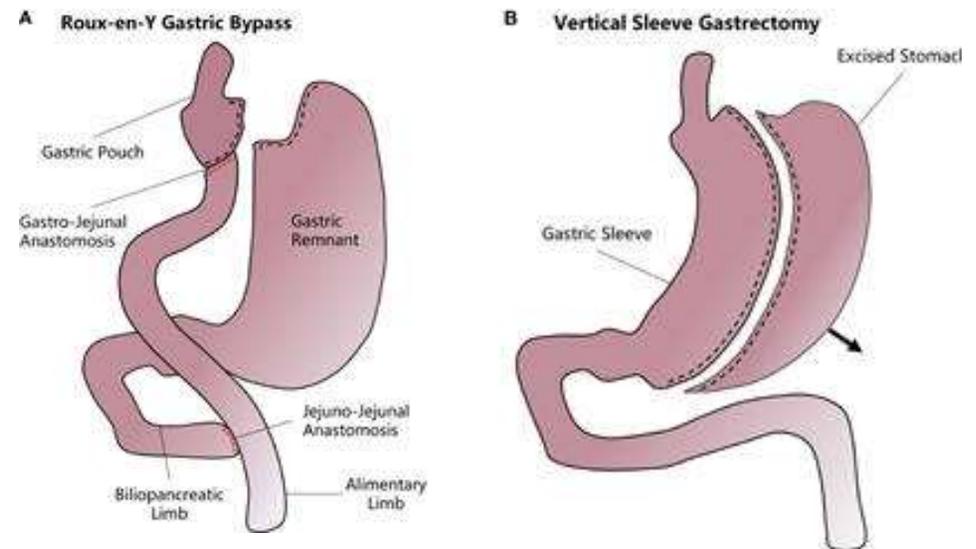
- ▶ Younger age, duration of diabetes (< 8 yrs), no pre-surgical insulin, greater visceral fat to lose (Asian Americans)
- ▶ **Year 5 Remission: 86.1% (VGS) & 83.5% (RYGB)**
- ▶ 35 – 50% re-developed diabetes
- ▶ Average remission time 8.3 years
 - ▶ Majority maintain improved glycemia for 5-15 years

*complete remission = A1c levels <6.0% without meds



Metabolic Surgery Benefits

- ▶ Superior glycemic mgmt & CVD risk reduction for people w/T2DM & Obesity compared to non-surgical interventions.
 - ▶ reduces microvascular disease
 - ▶ Improves quality of life
 - ▶ cancer risk reduction
 - ▶ Improved MASH
 - ▶ All cause mortality



Wt Loss Pharmacotherapy & Diabetes

- ▶ BMI \geq 27 + Diabetes
 - ▶ Weight loss meds may be effective + lifestyle
 - ▶ Assess benefit vs risk
- ▶ Minimize medications that cause wt gain:
 - ▶ Diabetes: sulfonylureas, insulin, TZDs
 - ▶ Co-morbidities: steroids, atypical antipsychotics, some antidepressants, b-blockers, etc.
- ▶ If wt loss < 5% at 3 months, re-assess
- ▶ If > 5% consider long term use
 - ▶ Exception: phentermine
 - ▶ Stopping GLP1/Dual RA shows regain of 50-75 % wt lost



GLP-1 RAs Approved for Weight Loss

▶ **Liraglutide**

- ▶ Victoza 1.8 mg (diabetes)
- ▶ Saxenda 3 mg (wt loss)
- ▶ 6% wt loss (3.0 mg),
\$1077/month*

▶ **Semaglutide**

- ▶ Ozempic 2 mg (diabetes)
- ▶ Wegovy 2.4 mg (wt loss)
- ▶ 9.6% wt loss (2.4 mg),
\$933/month*

▶ **Tirzepatide (GLP/GIP)**

- ▶ Mounjaro 15 mg (diabetes)
- ▶ Zepbound 15 mg (wt loss)
- ▶ 15% wt loss (15 mg) ,
\$1030/month

Approved for use in adults with a:

- ▶ BMI of ≥ 30 or
- ▶ BMI of ≥ 27 or greater who have hypertension, type 2 diabetes, or dyslipidemia

*NADAC

Assessing Malnutrition

- ▶ **At Risks Groups:**
 - ▶ Individuals on GLP-1 or GIP RA or s/p metabolic surgery
 - ▶ Individuals with multiple chronic conditions
 - ▶ Older age groups
 - ▶ Food insecurity and poverty

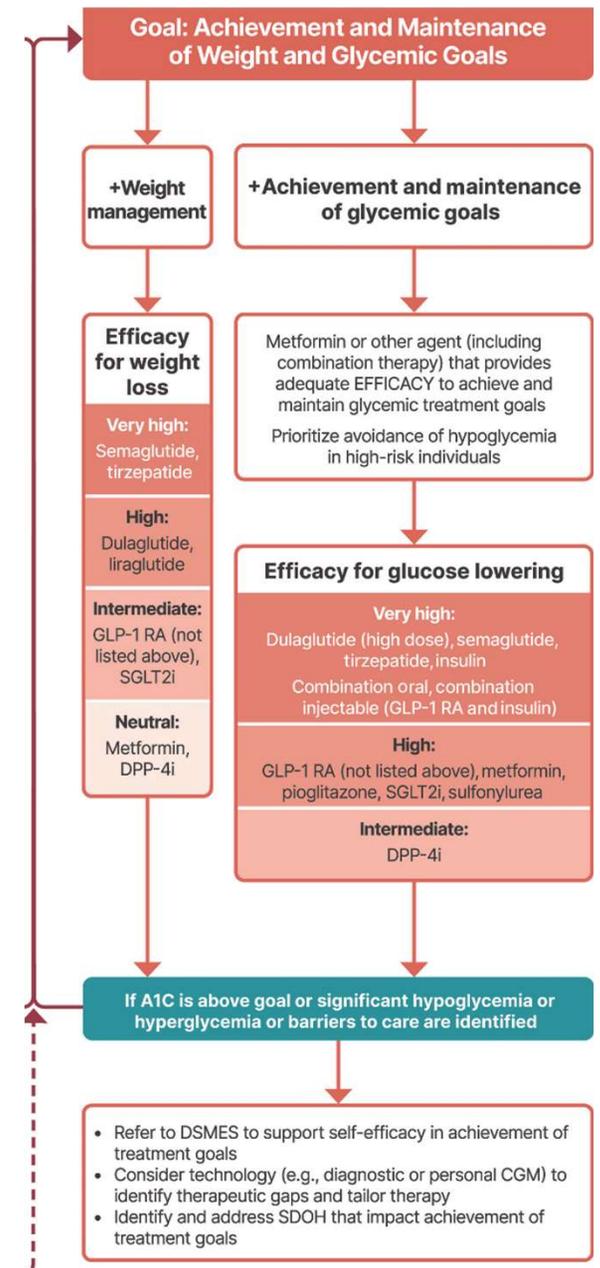
- ▶ **Screen:**
 - ▶ For malnutrition and sarcopenia
 - ▶ If > 20% wt loss or > 4 kg/month

Incretin Therapy: Nutrition Strategies

Adverse Effect	Nutrition Intervention
Prevent Malnutrition & Sarcopenia	Sufficient protein (min. 60 gm, up to 1.2-1.5 gm/kg), Nutrient-dense foods eating pattern to support needs Encourage resistance training
Nausea	Small frequent meals Limit high fat foods Stay hydrated, limit carbonation
Constipation	Fiber, Fluids & Movement Consider stool softener as needed.
Diarrhea	Fiber & Fluids Limit sugar alcohols, coffee, dairy, alcohol and carbonation

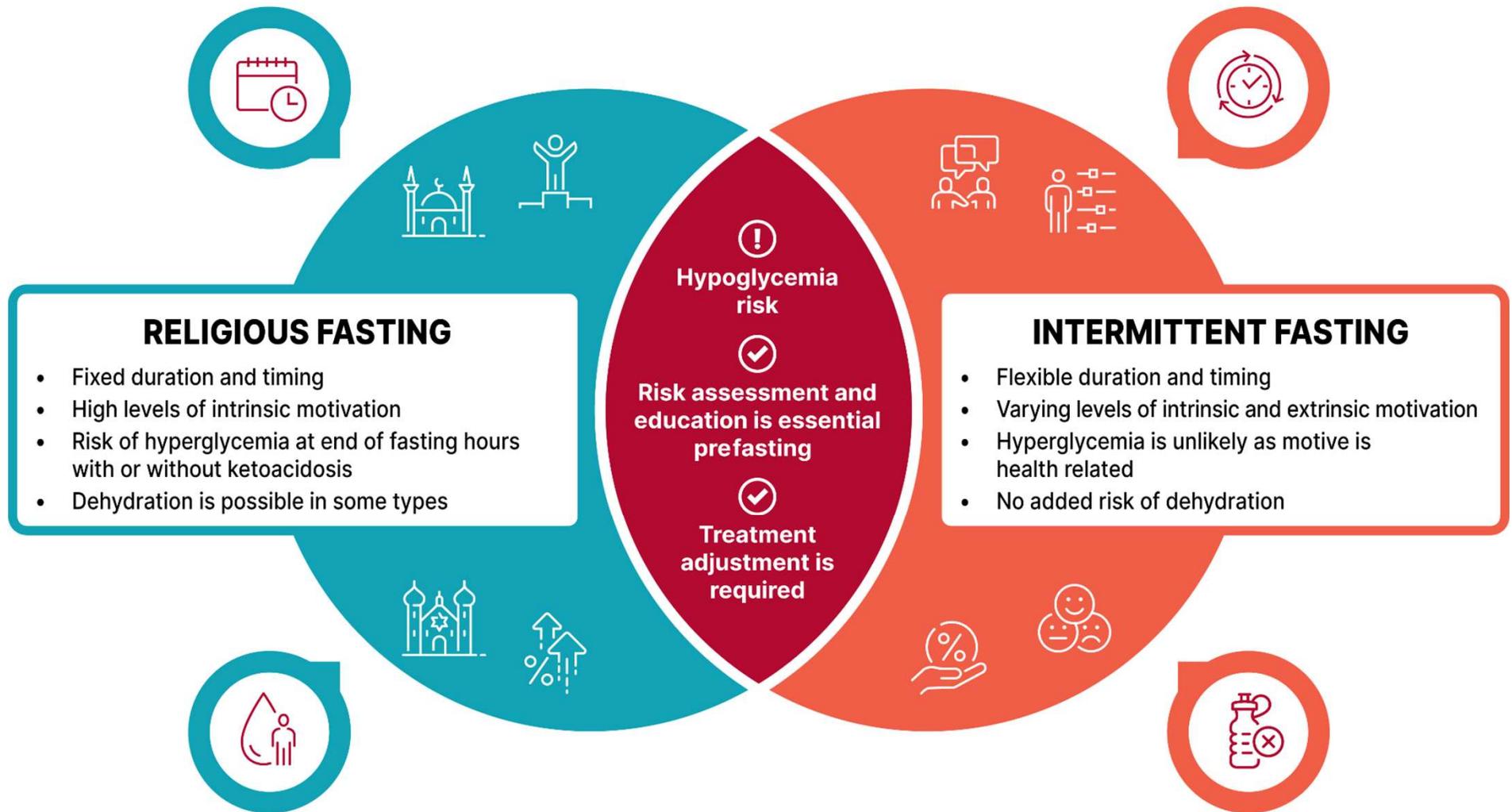
Treatment Options DM + Weight Goals

1. Set individualized goals
2. Consider options through shared decision making
3. If BMI ≥ 27 can consider medications. Consider those with highest efficacy
4. If BMI ≥ 30 with co-morbidities can consider metabolic surgery.



Fasting

Religious and Intermittent Fasting: Differences and Similarities



Intermittent Fasting

Results

- ▶ Each produces mild to moderate weight loss of 3–8% loss from baseline over short durations (8–12 weeks)
- ▶ No significant differences in weight loss, waist cir. when compared with continuous calorie restriction.
- ▶ Longer term studies needed

3 overall approaches

- Alternate-day fasting
 - 500–600 calories on alternating days
- 5:2 diet
 - 500–600 calories on two days with usual intake the other five
- Time-restricted eating
 - Daily calorie restriction based on 8-15 hour window of time

Poll question 5

- ▶ JM has type 1 diabetes, teaches aerobics. BMI was 17 and Fasting BG 312-380s at last visit. Which is most important intervention to improve diabetes management?
 - a. Eat a 15 gm carb snack before teaching class.
 - b. Acknowledge this hyperglycemia signifies end of honeymoon period
 - c. Increase basal insulin dose
 - d. Consider referral to mental health professional



Disordered Eating

- ▶ For people with type 1
 - ▶ insulin omission causing glycosuria to lose weight is the most reported disordered eating behavior.
 - ▶ Have high rates of diabetes distress and fear



- ▶ For people with type 2
 - ▶ bingeing episodes with an accompanying sense of loss of control most reported.
 - ▶ If treated with insulin, intentional omission is also frequently reported.

People with diabetes and diagnosable eating disorders have high rates of other psychiatric disorders

Poll Question 6

AJ is a 9-year-old with type 1 diabetes, A1c of 7.2%, uses an insulin pump and CGM. They ask you how to best work in a piece of birthday cake for an upcoming birthday celebration. What is the best advice?

- A. Take additional bolus insulin to cover the extra carbs.
- B. Accept the cake but don't actually eat it.
- C. Increase their daytime basal insulin to prevent hyperglycemia.
- D. Skip the previous meal to allow for the extra cake carbs.



Healthy Eating Patterns

- ▶ Carb-Restricted
- ▶ Mediterranean Diet
- ▶ Plant-based eating
- ▶ Vegetarian
- ▶ DASH (Dietary Approaches to Stop Hypertension)
- ▶ Structured low-calorie



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Carbohydrate-Restricted Pattern

- ▶ Reduced carb intake has significant evidence for improved glycemia
- ▶ **Low Carb Definitions**
 - ▶ Very Low = < 26% of kcals
 - ▶ Ketogenic: 20-50 gm carb, high fat
 - ▶ Most people consume 44-46% of kcals from Carb
- ▶ **HOW:** Focus on key nutrition principles, food quality, & choose minimally processed foods, high fiber



Systematic reviews and RCT found:

- Very low carbohydrate diet effectively reduced A1c at 6 months, less difference beyond 1 year.
- Ketogenic Diet increased LDL & no sig. difference in A1c compared with low-carb Mediterranean diet.

Very Low Carb Meal Plan Not Recommended for:

- ▶ Women who are pregnant or lactating or children
- ▶ People with or at risk for disordered eating
- ▶ People who have kidney disease
- ▶ Avoid ketogenic diets if taking SGLT-2 Inhibitor due to high risk of ketoacidosis
 - ▶ Educate on prevention, signs of DKA, how to measure ketones



Mediterranean Pattern

- ▶ **Emphasizes** vegetables, fruits, whole grains, beans/legumes
- ▶ **Includes** low-fat/non-fat dairy, fish, poultry, oils, nuts
- ▶ **Limits** highly processed foods/refined carbohydrates, added sugars, sugar-sweetened beverages, sodium, saturated fats, high fat/process meats

Find Recipes:



Meal Planning Tips:

<https://www.diabetesfoodhub.org/articles/meal-planning-for-a-mediterranean-style-eating-pattern.html>



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

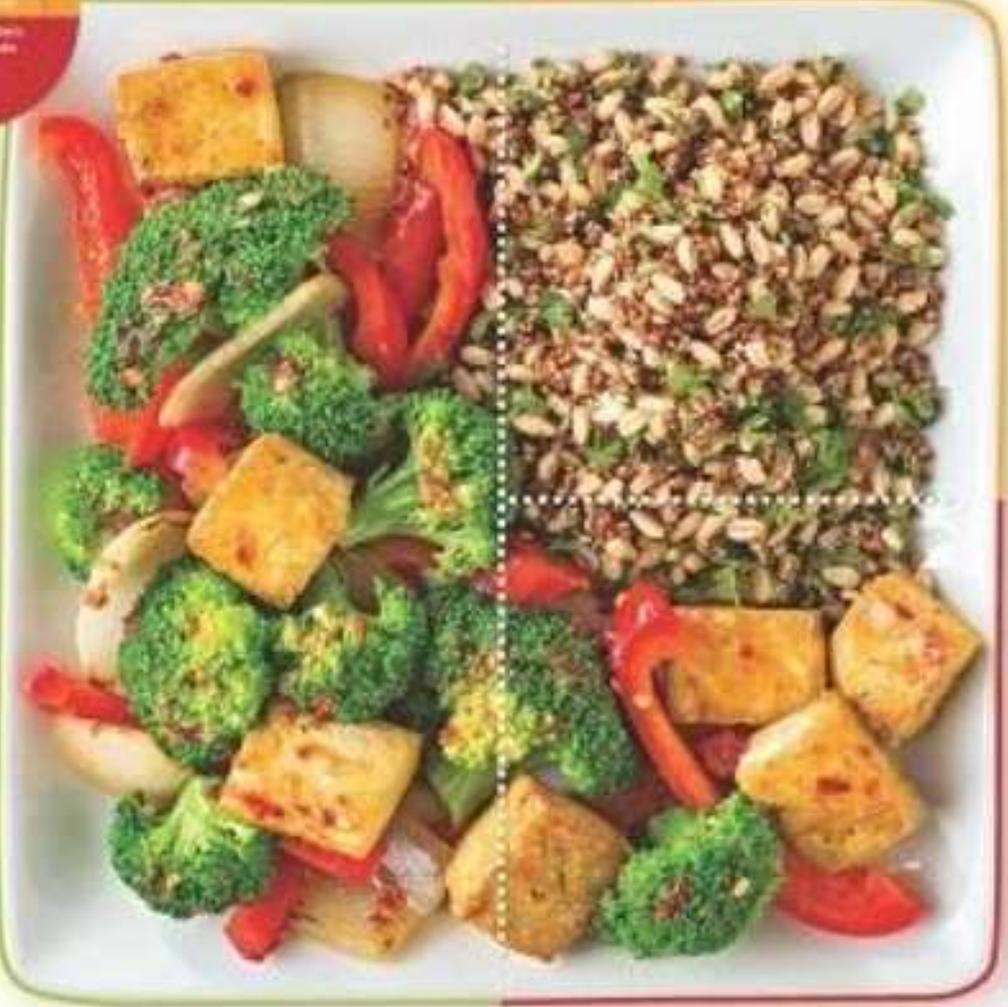
Plant-based, Vegetarian or Vegan Diet Patterns

Plan Your Portions

 Asparagus
 Broccoli
 Brussels sprouts
 Cabbage (cut in half)
 Cauliflower
 Cucumbers
 Eggplant
 Spinach
 Mushrooms
 Onions
 Peas
 Peppers
 Radishes
 Salad greens
 Tomatoes
 Zucchini

Portion Guide







Water or no-calorie drinks

 Corn
 Egg noodles
 Fruit
 Nuts
 Whole grains
 White rice
 Beans, lentils and peas
 Milk and yogurt
 Cheese
 Eggs
 Nut butter
 Oils
 Toppings
 Tofu

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

9 inches



American Diabetes Association

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Dietary Approaches to Stop Hypertension (DASH)

► Key Components:

- Fruits, Vegetables & Whole Grains: Rich in fiber, potassium, & magnesium
- Lean Protein Sources: Such as poultry, fish, & beans
- Low-Fat Dairy Products
- Healthy Fats: From sources like nuts, seeds, & vegetable oils

► Limits:

- Saturated fat. Added Sugars. Processed Meat. High Sodium Foods.



*Potential benefits:
reduced risk of
diabetes, wt loss,
lowered BP*

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Very Low- Calorie Diets: 800-1000 kcals/day

- ▶ Uses high protein foods, meal replacements
- ▶ Small studies demonstrated in T2DM & obesity
 - ▶ Increased rate of wt loss & A1c reduction
- ▶ Monitor Closely:
 - ▶ Electrolyte abnormalities, severe fatigue, cardiac arrhythmias, etc.
 - ▶ Weight regain more likely than with lifestyle



USDA MyPlate.gov

Make Every Bit Count

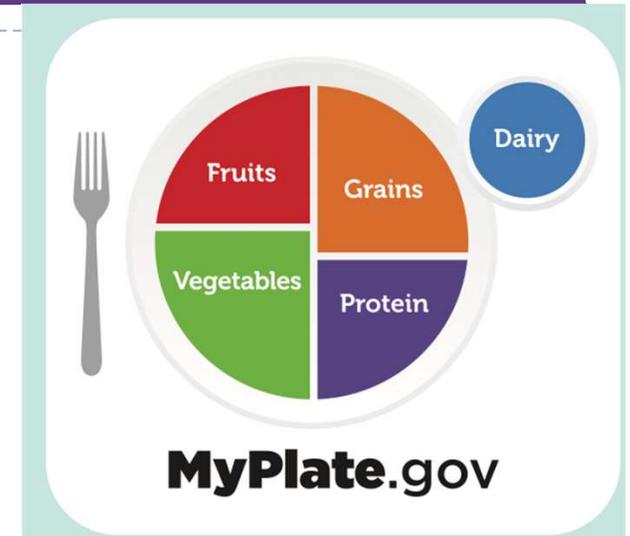
- ▶ Eat a variety of fruits, vegetables, grains, protein foods, dairy/fortified soy alternatives

Foods to Increase

- ▶ Make half your plate fruits and vegetables.
- ▶ Make at least half your grains whole grains.
- ▶ Move to low-fat or fat-free dairy milk or yogurt (or lactose-free dairy or fortified soy versions)
- ▶ Vary your protein

Foods to Reduce

- ▶ Added sugars, saturated fat, and sodium
- ▶ Check packaged foods that have less or no added sugar
- ▶ Choose plain water/sparkling water with a squeeze of fruit



Tools: Myplate-Kitchen, Shop Simple with MyPlate

Eating Approaches

Tools for developing an eating pattern

- ▶ Diabetes Plate Method
- ▶ Individualized behavioral approaches
- ▶ Carbohydrate Choice
- ▶ Carbohydrate Counting



Plan Your Portions

-  Broccoli
-  Broccoli sprouts
-  Cabbage (shaved)
-  Carrots
-  Cauliflower
-  Cucumbers
-  Dark leafy greens
-  Eggplant
-  Fennel
-  Onion
-  Spinach
-  Peppers
-  Squash
-  Tofu
-  Tomatoes
-  Zucchini



Plan Your Portions



Water or no-calorie drinks

-  Garbanzo beans
-  Whole wheat pasta
-  Tropical fruits (mango, papaya, guava)
-  Apples
-  Brown basmati rice
-  Whole grains
-  Beans, lentils and peas
-  Milk and yogurt
-  Chicken
-  Eggs and seafood
-  Pork, salmon, tuna, etc.
-  Lean beef
-  Shrimp
-  Tofu

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

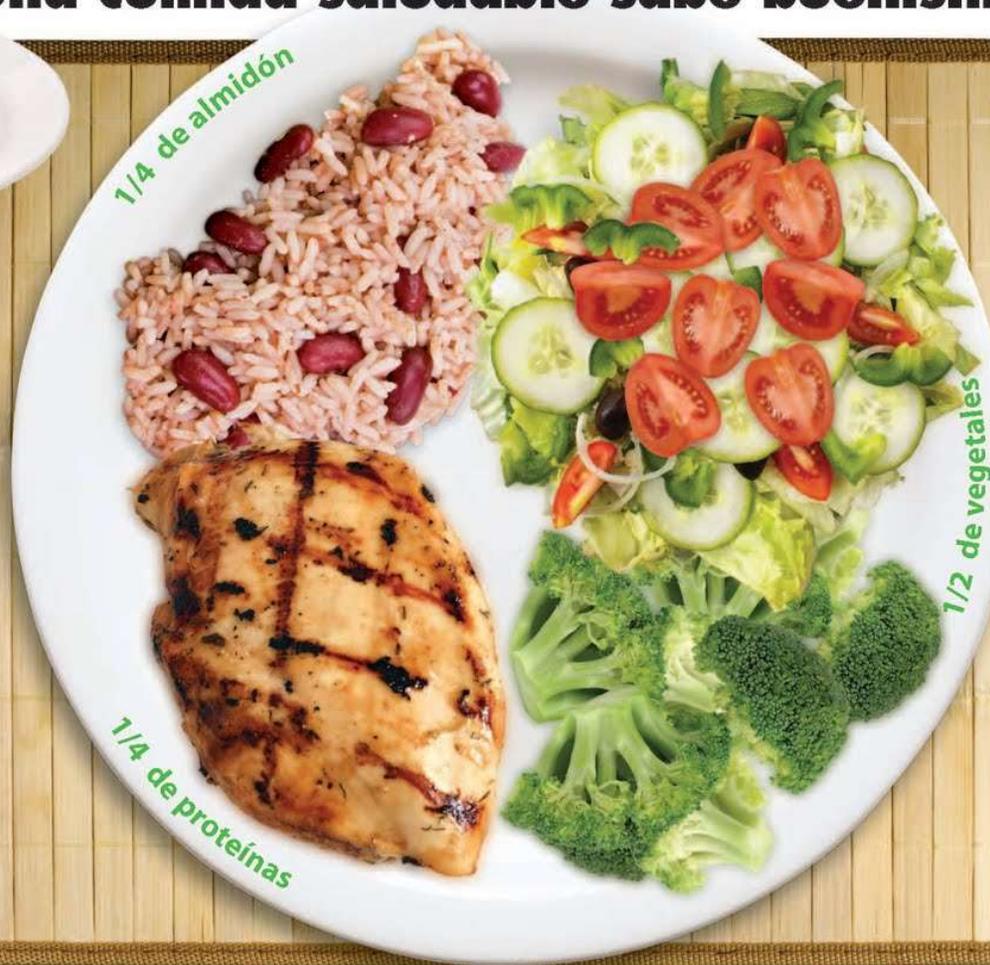
9 inches

Tailor to Cultural Needs

Mi planificador de plato Una comida saludable sabe buenísima



El Método del Plato es una manera simple de planificar las comidas para usted y su familia. No necesita contar nada ni leer largas listas de alimentos. Todo lo que necesita es un plato de 9 pulgadas.



1/4 de proteína. 1/4 de almidón. 1/2 de vegetales.

Plato de 9 pulgadas



Michael R. Bloomberg,
Alcalde
Thomas R. Frieden, M.D., M.P.H.,
Comisionado



HPD100863-108

More Nutrition Behaviors

Cook with

- herbs and spices
- onions, garlic, celery, carrots and other vegetables
- vegetable oils instead of butter, shortening, lard

Meal Prep

- plan meals & grocery lists

Include Family with Meal Planning/Prep

- Gain support

Carb Management Strategies

- ▶ No ideal amount of daily carb intake
- ▶ Monitoring Carb Intake is a key strategy for glycemic management in T1DM & T2DM

- ▶ **Educate individuals taking prandial insulin:**

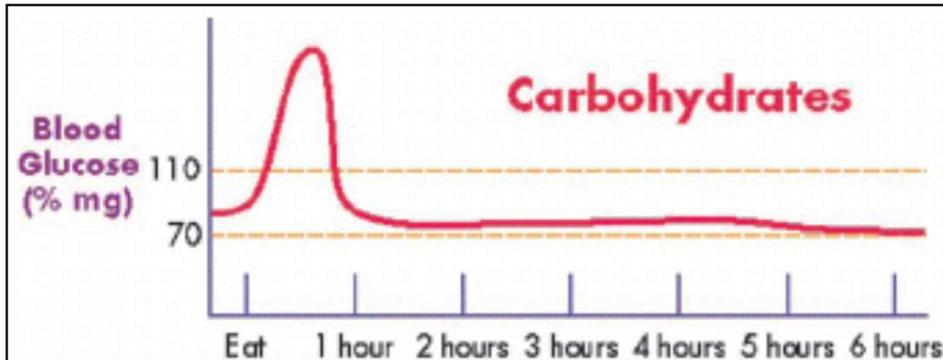
- ▶ relationship of carb intake & insulin needs to promote post meal blood glucose mgmt.
- ▶ Using Insulin to Carbohydrate Ratios



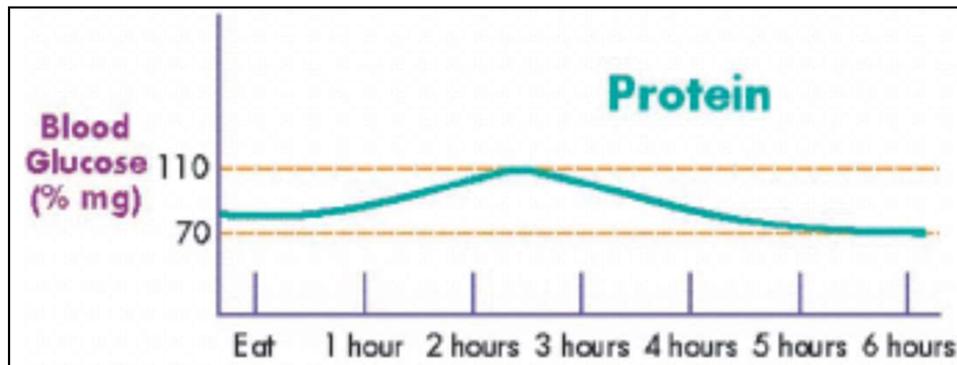
ADAM.

- Starch
- Fruit
- Milk
- Desserts

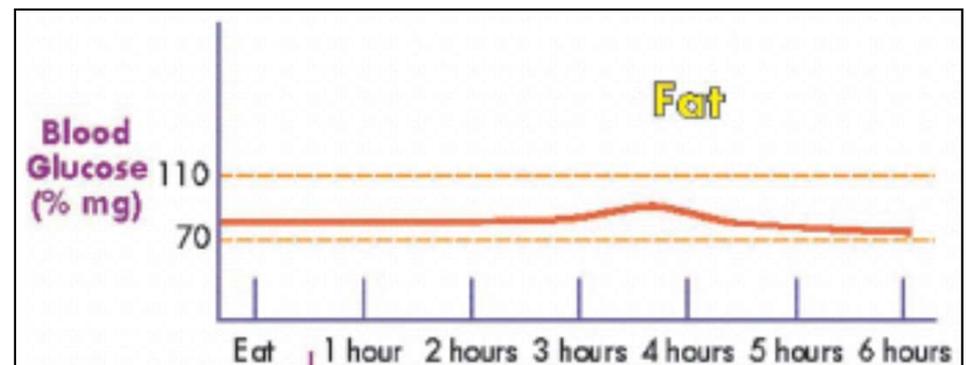
How Nutrients Affect Blood Sugar



Fixed-Dose Insulin Regimen:
Rec Consistent Carb Plan



If type 1/MDI, may need additional or change in insulin amount for high fat / protein meals



Estimating Carbohydrate for Meals Example (Not ADA Standard)

	<u>Grams</u>	<u>Servings</u>
Each Meal	45-60 gm	3 - 4
Snacks	15-30 gm	1- 2



Carbs affect Post-Meal Glucose
RDA – at least 130 grams of Carb a day
PWD get about 45% of Cals from carbs

Calories	20%	30%	40%	50%
1500	75 g	113 g	150 g	188 g
2000	100 g	150 g	200 g	250 g

Poll Question 7

SC can't figure out why their BG always spikes after breakfast. How many grams of carb is in the following breakfast using the exchange list? 1 cup of plain oatmeal, ½ cup of milk, 2 Tbsp raisins, and 2 eggs with salsa?

- a. 57 gms
- b. 36 gms
- c. 51 gms
- d. 37 gms



Diabetes Choose Your Foods Lists

The Diabetic Exchange List

	Carbohydrate (grams)	Protein (grams)	Fat (grams)	Calories
I. Starch/Bread	15	3	trace	80
II. Meat				
Very Lean	-	7	0-1	35
Lean	-	7	3	55
Medium-Fat	-	7	5	75
High-Fat	-	7	8	100
III. Vegetable	5	2	-	25
IV. Fruit	15	-	-	60
V. Milk				
Skim	12	8	0-3	90
Low-fat	12	8	5	120
Whole	12	8	8	150
VI. Fat	-	-	5	45

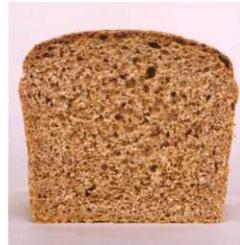
Carb Counting - Starch



1/2 cup
cooked beans



1 small ear of corn or
1/2 cup corn



1 slice bread



1/3 cup
cooked pasta



3/4 cup cold
cereal



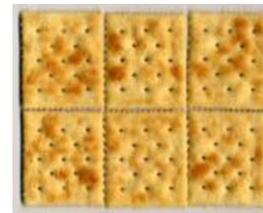
1/3 cup
cooked rice



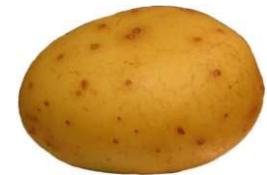
6" tortilla



6" roti



5-6 small crackers



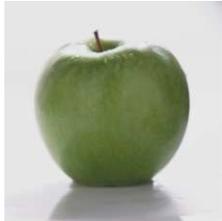
1 small potato



1/2 English muffin

Each Food has:
80 Calories
15 grams carb

Carb Counting- Fruit



1 small fresh fruit



1/2 cup fruit juice



1/2 banana, 4"

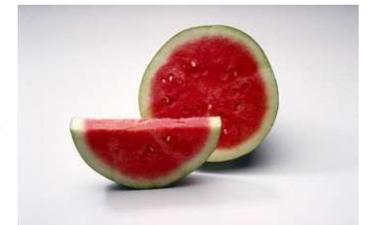


1/2 cup unsweetened apple sauce



17 small grapes

Each Food has:
60 Calories
15 grams carb



1 cup melon

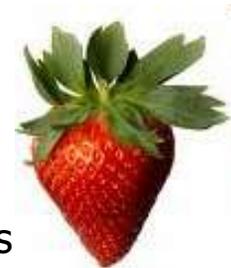
1/4 cup dried fruit



2 tbsp raisins



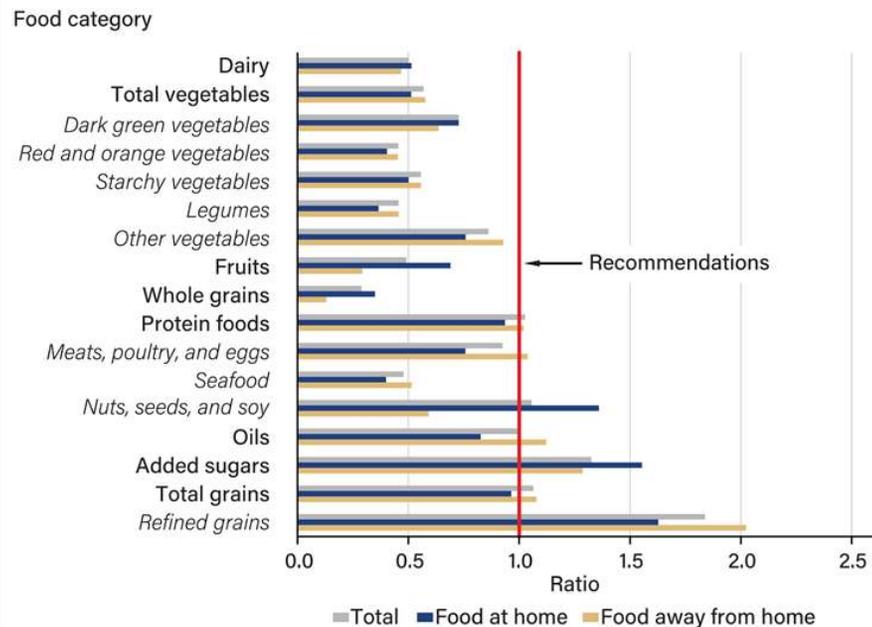
1 1/4 cup strawberries



~ 1 in 10 meet Fruit & Vegetable Recommendations

Dietary quality of U.S. consumers aged 2 and above by food category, 2017–18

USDA Economic Research Service
U.S. DEPARTMENT OF AGRICULTURE



Note: The **ratio** is the actual consumption densities calculated from comparing survey data to the Federal recommended densities for a diet of 2,000 calories. Density is the amount of food consumed per 1,000 calories.

Source: USDA, Economic Research Service using data from USDA, Agricultural Research Service and U.S. Department of Health and Human Services 2017–18 What We Eat in America, National Health and Nutrition Examination Survey. Dietary benchmarks based on Dietary Guidelines for Americans 2020–25.

Source: <https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=106562>

US Adults:

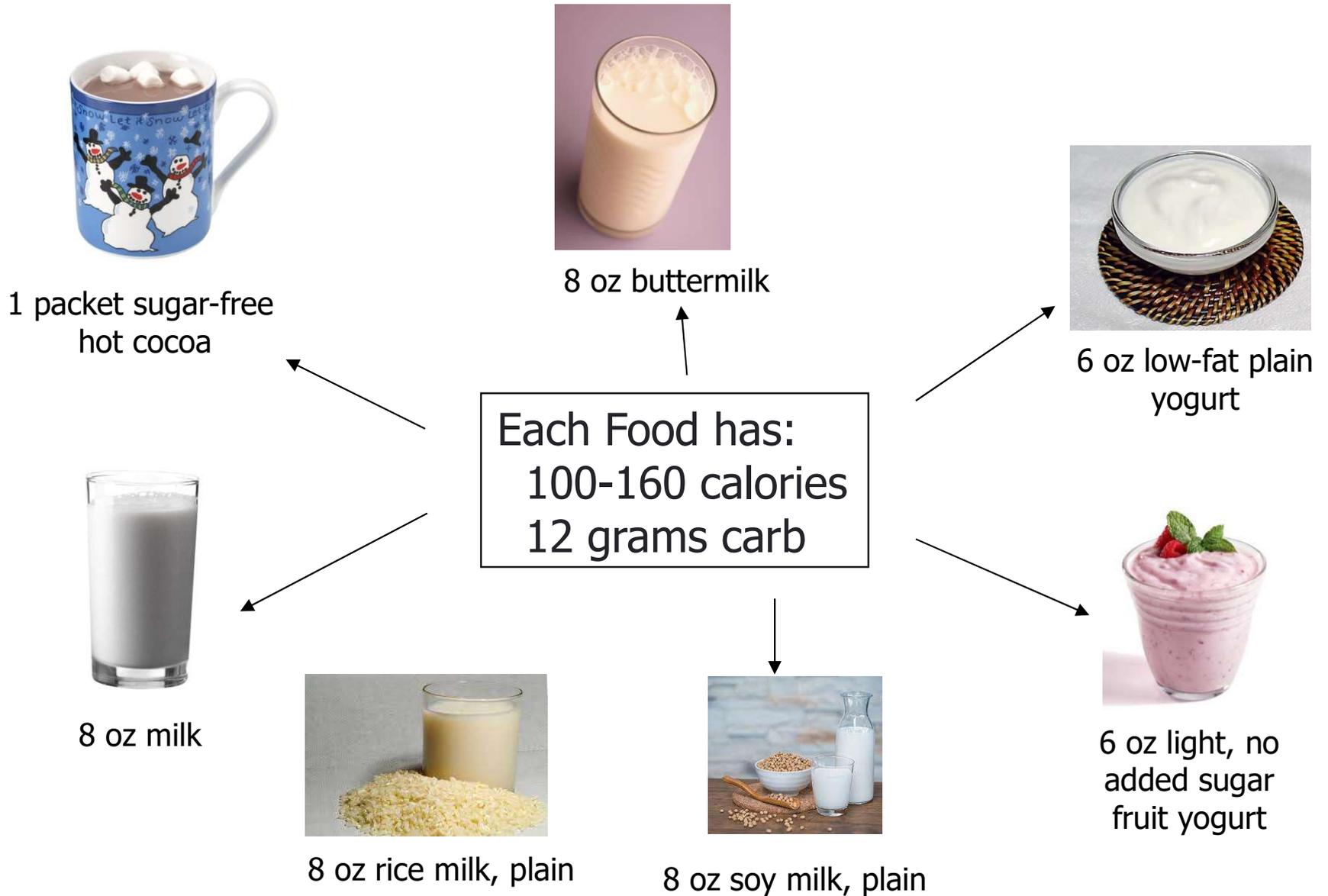
12.3% met fruit recommendation

- Highest among Hispanic adults (16.4%) and lowest among males (10.1%)

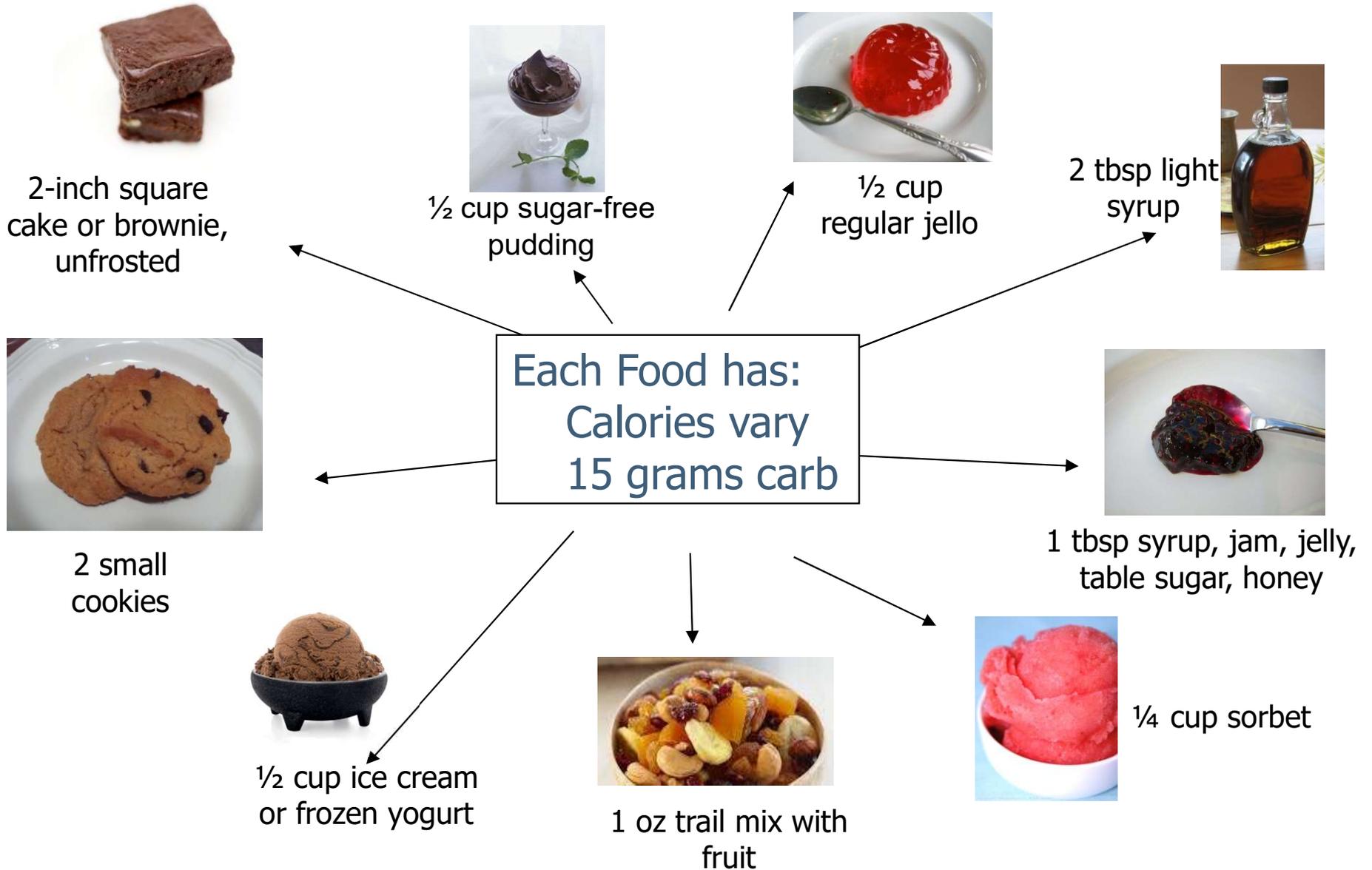
10.0% met vegetable recommendation

- Highest among adults ≥51 yrs (12.5%) and lowest among adults with low income (6.8%)

Carb Counting - Milk



Carb Counting - Sweets



Poll Question 8

JR has type 2 diabetes and is trying to lose weight by eating less and moving more. JR asks your advice about drinking diet sodas. Based on the recommendations in the ADA Standards of Care, what is the best the response?

- A. Sodas that contain non-nutritive sweeteners help with weight loss and increase sugar cravings.
- B. Try to decrease intake of beverages with non-nutritive sweeteners and increase water intake.
- C. Drinking beverages with non-nutritive sweeteners is better than drinking sugary beverages.
- D. Research has found that drinking beverages with nonnutritive sweeteners decreases diabetes risk.



Non-Nutritive Sweeteners

- ▶ Use in moderation & short term to reduce overall kcals /carb
- ▶ Encourage decrease in both sweetened (SSB) & non-nutritive sweetened (NNS) beverages
- ▶ NNS may be acceptable for those transitioning from SSB
- ▶ Emphasize water intake

How: add lemon, lime, or cucumber slices to water, choose no calorie waters



STANDARDS OF CARE | DECEMBER 09 2024

5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes—2025 **FREE**

American Diabetes Association Professional Practice Committee

<https://www.fda.gov/food/food-additives-petitions/aspartame-and-other-sweeteners-food>

Caloric Sweeteners

- ▶ Nutritive sweeteners (sucrose and fructose)
 - ▶ No specific ADA limit for added sugars
 - ▶ When substituted isocalorically with other carbs, no significant affect on A1c.
 - ▶ **Strongly discourage added sugars as this can displace healthier, more nutrient-dense foods.**
 - ▶ Fructose as sweetener not recommended since may adversely affect lipids. Naturally occurring fructose okay.



Reduced Caloric Sweeteners

▶ Sugar alcohols

- ▶ Not completely absorbed, so less calories
- ▶ Unpleasant side effects, diarrhea, bloating and gas
- ▶ Examples: Sorbitol, maltitol, erythritol, isomalt, xylitol, lactitol, mannitol, tagatose
- ▶ Carb Count: Estimate that $\frac{1}{2}$ of the sugar alcohols will impact glucose. Subtract $\frac{1}{2}$ from the total amount of carbohydrates

▶ Allulose

- ▶ Contributes few calories, produces negligible increases in blood glucose and insulin levels, does not promote dental decay
- ▶ Carb Count: Included in total carbohydrates but not total sugars. Subtract all grams from total carbohydrates on the food labels. Calories = 0.4 kcals/gram

Reading the Food Label

1. Check the **Serving size** first. All the numbers on this label are for a 2/3-cup serving.
2. This package has **8 servings**. If you eat the whole thing, you are eating 8 times the amount of calories, carbs, fat, etc., shown on the label.
3. **Total Carbohydrate** shows you types of carbs in the food, including sugar and fiber.
4. Choose foods with **more fiber, vitamins, and minerals**.
5. Choose foods with **lower calories, saturated fat, sodium, and added sugars**. Avoid *trans* fat.

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.

Label – How many Teaspoons of added sugar in the Buns and BBQ sauce?

Nutrition Facts

8 servings per container
Serving size 1 Bun (62g/2.2oz)

Amount per serving
Calories 160

	% Daily Value*
Total Fat 1.5g	2%
Saturated Fat 0g	0%
Trans Fat 0g	
Polyunsaturated Fat 0.5g	
Monounsaturated Fat 0.5g	
Cholesterol 0mg	0%
Sodium 260mg	12%
Total Carbohydrate 32g	12%
Dietary Fiber 2g	6%
Total Sugars 6g	
Includes 6g Added Sugars	11%
Protein 6g	
Vitamin D 0.5mcg	2%
Calcium 40mg	4%
Iron 0.7mg	4%
Potassium 80mg	0%

**1 tsp = 4 gms
sugar (15 Cals)**

1.5
teaspoons

2.5
teaspoons

BBQ Sauce

Nutrition Facts

About 14 servings per container
Serving size 2 Tbsp (37g)

Amount Per Serving
Calories 50

	% Daily Value*
Total Fat 0g	0%
Saturated Fat 0g	0%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 350mg	15%
Total Carbohydrate 13g	5%
Dietary Fiber 0g	0%
Total Sugars 11g	
Includes 10g Added Sugars	20%
Protein 0g	
Vitamin D 0mcg	0%
Calcium 30mg	2%
Iron 0.5mg	2%
Potassium 120mg	2%

* The % Daily Value 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.

8 Apps To Improve Time in Range

Name of App	Cost	Category	Description
Undermyfork	Free	Nutrition and fitness	<ul style="list-style-type: none"> • App concept: Take photos of your meals instead of manually logging. • Meal analysis: App determines carb count and ingredients from the photo. • Syncs with CGM/glucometer: Evaluates treatment plan - manages post-meal blood glucose rise. • Sharing with healthcare providers: Allows sharing of meal and blood sugar data to track how ingredients, insulin timing, and amount affect blood sugar.
Eddii	Free, with in-app purchases	Management and Monitoring	<ul style="list-style-type: none"> • App concept: Tracks readings from Dexcom G6/G7 CGM through fun games, quizzes. • Target audience: Designed for all ages, but especially appealing to children and their parents. • Parent features: Can add rewards like access to in-app games and real gift cards. • Social connection: Kids can connect with friends who have diabetes. • Mental health support: Chatbot offers mental health support and health tips. • New feature: Virtual pediatric endocrinology visits available in multiple U.S. states. • Telehealth for adults: Endo telehealth services available in nine states.
Diabetes Cockpit	Free with in-app purchases	Management and Monitoring	<ul style="list-style-type: none"> • App concept: Uses artificial intelligence to review data and provide feedback on glucose trends. • Data analysis: Glucose levels, carbs consumed, insulin delivered, steps taken, and more. • Data integration: Automatically pulls data from iPhone's Health app (fitness trackers, meal tracking apps, CGM, glucometer). • Alternative data source: Can import data from Nightscout, an open-source app tracking food and treatment info. • Reports: Converts data into useful graphs and reports showing patterns and trends. • AI chatbot (Sam): Offers insights on time in range, food patterns, answers questions.
Glucose Buddy	Coaching plan starts as \$20/monthly	Management and Monitoring	<ul style="list-style-type: none"> • Multi-pronged approach: Combines data tracking, in-app coaching, and glucometer supplies. • Data tracking: Logs blood glucose, daily steps, exercise, and provides weekly reports with improvement suggestions. • Meal logging: Use smartphone camera to snap photos of meals, which the app analyzes using a large food database to track carbs, fat, and protein. • Post-meal analysis: Tracks meals effect on post-meal blood glucose, synced with CGM or glucometer data. • Sharing: Data can be shared with healthcare providers for feedback and adjustments. • In-app coaching: Available with a subscription plan, offering text chat with a CDCES • Subscription benefits: Includes test strips and a smart glucometer that syncs wirelessly with the app Community support

Poll Question 9

You are teaching label reading.
If a person ate 4 servings of
this Macaroni and Cheese,
how much saturated fat would
they be eating?

- a. 32 gms
- b. 40%
- c. 2 2/3 cup
- d. 4 gms



Nutrition Facts	
1	8 servings per container Serving size 2/3 cup (55g)
2	Amount per serving Calories 230
	% Daily Value*
3	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
4	Includes 10g Added Sugars 20% Protein 3g
5	Vitamin D 2mcg 10% Calcium 200mg 15% Iron 8mg 45% Potassium 235mg 6%
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.

Poll Question 10

You are teaching about fat intake. If a person ate 2 servings of this Macaroni and Cheese, how many calories would come from total fat?

- a. 16 gms
- b. 144 kcals
- c. 460 kcals
- d. 20%

Nutrition Facts	
1	8 servings per container Serving size 2/3 cup (55g)
2	Amount per serving Calories 230
% Daily Value*	
3	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
4	Includes 10g Added Sugars 20%
	Protein 3g
5	Vitamin D 2mcg 10% Calcium 200mg 15% Iron 8mg 45% Potassium 235mg 6%
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.

Fats- 9 calories per gram

▶ Monounsaturated - healthy

- Olive & canola oils, Nuts, Avocado
- Lowers total cholesterol and LDL
- Raise HDL, high in omega 3 fatty acids

▶ Polyunsaturated – healthy

- corn, walnut, safflower, soybean, avocado
- Lowers total cholesterol and LDL

▶ Saturated fats (unhealthy)

- Animal products – meat, chicken, pork, fish, skin, cheese, butter, dairy
- Plant products include- palm, coconut, palm kernel oil
- Solid at room temp

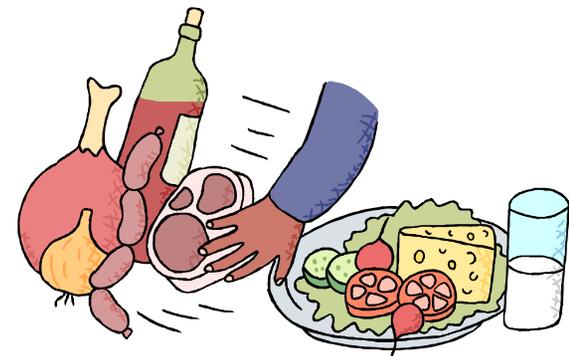
Serving sizes

- 1 tsp butter, margarine, oil, mayonnaise
- 1 Tbsp salad dressing, cream cheese, seeds
- 2 Tbsp avocado, cream, sour cream
- 1 slice bacon



Fat –ADA Standards of Care

- ▶ No optimal amount of total fat for people with/at risk of diabetes
 - ▶ **Goals should be individualized** for eating pattern, preferences & metabolic goals
 - ▶ **Type of fat more important** than quantity
 - ▶ Limit intake of saturated fat for CVD & liver health
- ▶ **Mediterranean like Patterns**
 - ▶ RCT shows improved A1c & Lipids
- ▶ **Follow guidelines for general population:**
 - ▶ Amount of dietary saturated fat, dietary cholesterol, & trans fat



Protein – 4 cals per gram

- Choose lean protein
 - Encourage plant sources- beans, lentils, nuts
 - Lean Animal Based Options:
 - Poultry, fish, egg, lean beef
 - Low fat cheese- cottage cheese, mozzarella cheese
- Limit high fat protein
 - Bacon & sausage
 - High fat cuts of beef
 - Whole milk cheese
- Serving size
 - 1 oz = ¼ cup
 - 3 oz = deck of cards



**ADA Standards of Care, Amount of Protein:
Inconclusive.**

Typically consumed: 1-1.5 gm/kg (15-20% of total kcals)

Protein and Kidney Disease

- ▶ Individualize based on eating pattern
 - ▶ RDA: 0.8 gm/kg/day
 - ▶ Reducing below this not recommended – does not improve BG, CVD or slow kidney disease progression
- ▶ Increase plant-based sources

Do not use protein foods to treat hypoglycemia for type 2 (can enhance insulin release)



Higher plant protein intake is associated with lower risk of all-cause and CVD mortality
Women's Health Initiative cohort study

Poll Question 11

What does a serving size look like?



12 oz. steak

5 oz. steak

Avg person needs about 60gms a day
5 ounces steak is ~35gms

MJ is on an insulin pump and takes 1 unit of insulin for every 15 gms of carb. For this meal with 5 ounces of steak, MJ bolused 3 units of insulin to cover carbs. What might MJ expect to happen 3 hours later?

- A. Glucose spike
- B. Hypoglycemia
- C. BG on target
- D. Need for more carbs

Poll Question 12

JL is 19 and has type 1 diabetes, drinks a “few beers” on the weekends with their college friends. JL uses an insulin pump, but mostly relies on BG monitoring. According to their log, JL has had a few low blood glucose levels over the past weekend of 62, 49 and 51. What is the most important recommendation?



- ▶ A. Check BG at least 4 times a day when drinking.
- ▶ B. Get glucagon rescue medication.
- ▶ C. Make sure to eat carbs when drinking to avoid low blood glucose levels.
- ▶ D. Decrease or stop alcohol intake.

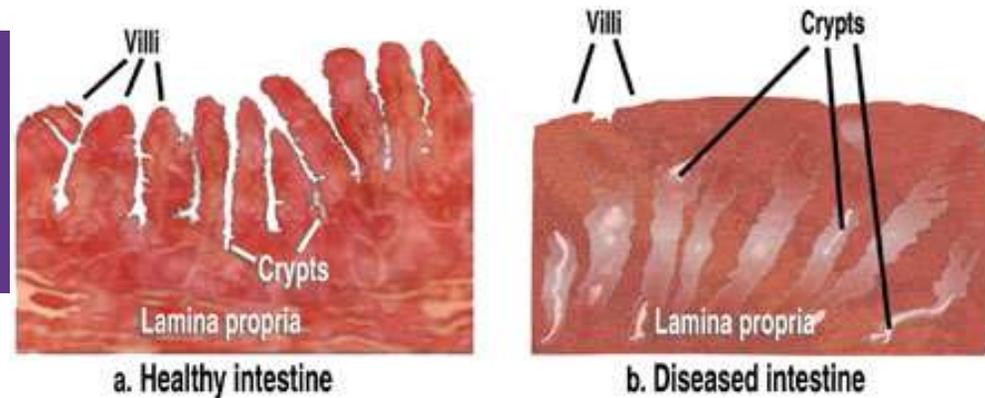
Consuming Alcohol Safely

- ▶ No benefit for those who do not drink
- ▶ To reduce risk of harm: consume in moderation & with food
 - ▶ Women: < 1 drink per day
 - ▶ Men: < 2 drinks a day
- ▶ Risks:
 - ▶ hypoglycemia, weight gain, hyperglycemia, may worsen neuropathy



1 drink equals:
12 oz beer, 5 oz glass of
wine, or 1.5 oz distilled
spirits (vodka, gin etc)

Celiac Disease:



Type 1 – Affects ~6 %

▶ Immune reaction to gluten

- ▶ affects function of villi in intestine, decreasing nutrient absorption

▶ Signs and Symptoms:

- ▶ Diarrhea, malabsorption/ fatty stools, abd bloating or pain, wt loss, muscle tenderness, failure to thrive, signs of deficiencies

▶ Screen

- ▶ youth with type 1 at diagnosis, within 2 years, & after 5 years or more
- ▶ Adults with diabetes if + symptoms or signs of nutrient deficiencies

▶ Diagnosis

- ▶ check IgA tissue transglutaminase (tTG) antibodies or IgG tTG & deamidated gliadin antibodies, if IgA is deficient

Treatment – Gluten Free for Life

Treatment: Reduces symptoms and hypoglycemia



Avoid Gluten:

“BROW”

- ▶ Barley
- ▶ Rye
- ▶ Oats (cross- contaminated)
- ▶ Wheat (einkorn, durum, faro, graham, kamut, semolina, spelt)
- ▶ Refer to RDN

ASSOCIATED AUTOIMMUNE DISORDERS

- ▶ Insulin-dependent Type 1 Diabetes Mellitus, Liver diseases, Thyroid Disease-Hashimoto’s Thyroiditis, Lupus (SLE), Addison’s Disease, Chronic Active Hepatitis, Rheumatoid Arthritis

Poll question 13

John has gastroparesis and is struggling with bloating and nausea after meals. What is the best recommendation?

- a. Eat low fiber, small meals
- b. Eat raw vegetables and limit fruit
- c. Always take insulin after meals
- d. Avoid foods containing wheat



Gastroparesis



- ▶ **Gastroparesis: affects 20 – 30% of people w/ longstanding diabetes**
 - ▶ Delayed emptying of stomach contents due to nerve damage
- ▶ **S/S: early satiety, fullness, postprandial hypo, vomiting**
- ▶ **Diagnosis: gastric emptying studies**
- ▶ **Treatment: Improves BG & GI symptoms**
 - ▶ **Diet: smaller frequent meals, small food particle size/liquids, low-fat, low fiber**
 - ▶ **Address nutritional and fluid deficiencies**
 - ▶ **Meds: Prokinetics, Antiemetic drugs, TCAs**

Nutrition Therapy for Adults With Diabetes or Prediabetes: A Consensus Report

Alison B. Evert¹, Michelle Dennison², Christopher D. Gardner³, W. Timothy Garvey^{4,5}, Ka Hei Karen Lau⁶, Janice MacLeod⁷, Joanna Mitri⁸, Raquel F. Pereira⁹, Kelly Rawlings¹⁰, Shamera Robinson¹¹, Laura Saslow¹², Sacha Uelmen¹¹, Patricia B. Urbanski¹³ and William S. Yancy Jr.^{14,15}†

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<https://doi.org/10.2337/dci19-0014>



Last Note – Facts to Know

- ▶ Fat - 9 cal per gm
- ▶ Carb – 4 cal per gm
- ▶ Protein – 4 cal per gm
- ▶ Alcohol - 7 cal per gm
- ▶ Common food carb count
- ▶ Milk is 12 gms of carb
- ▶ Alcohol serving sizes
- ▶ 1 lb = 3,500 cal
- ▶ 7,500 to 10,000 steps recommended a day
- ▶ 2000 steps = 1 mile



DiabetesEd Mastery Series Schedule

Diabetes Mastery & Cert Readiness 2025 Webinar Updates

2024 WEBINARS RECORDED & READY TO WATCH UPON ENROLLMENT

All Courses Begin at 11:30 am PST

- Feb. 6, 2025 | Class 1: Diabetes | Not Just Hyperglycemia | 1.75 CEs
- Feb. 11, 2025 | Class 2: Standards of Care & Cardiovascular Goals | 1.8 CEs
- Feb. 13, 2025 | Class 3: Meds for Type 2 | What you need to know | 1.75 CEs
- Feb. 18, 2025 | Class 4: Insulin Therapy | From Basal/Bolus to Pattern Management | 1.75 CEs
- Feb. 20, 2025 | Class 5: Insulin Intensive & Risk Reduction | Monitoring, Sick Days, Lower Extremities | 1.75 CEs
- Feb. 25, 2025 | Class 6: Medical Nutrition Therapy | 1.75 CEs
- Feb. 27, 2025 | Class 7: Microvascular Complications & Exercise | Screen, Prevent, Treat | 1.75 CEs
- Mar. 3, 2025 | Class 8: Coping & Behavior Change | 1.75 CEs
- Mar. 5, 2025 | Class 9: Test-Taking Coach Session (75+ Practice Questions) | No CE

Thank You



- ▶ Questions?
- ▶ Info@DiabetesEd.net
- ▶ 530-893-8635
- ▶ We are here to help.