Navigating the Real World of Eating Plans – Beyond Carb Counting

AADE19
August 9, 2019
3:15 – 4:15 p.m.

Patti Urbanski
MEd, RD, LD, CDE
Diabetes Educator/Clinical Dietitian
St. Luke's Diabetes Care
Duluth, MN
Alison Evert  
MS, RD, LD, CDE  
Manager, Nutrition and Diabetes Programs  
UW Medicine – UW Neighborhood Clinics  
Seattle, WA

Disclosure to Participants

• Notice of Requirements For Successful Completion
  – Please refer to learning goals and objectives
  – Learners must attend the full activity and complete the evaluation in order to claim continuing education credit/hours

• Conflict of Interest (COI) and Financial Relationship Disclosures:
  – Presenter: Patti Urbanski, MEd, RD, LD, CDE – Stockholder, Medtronic Diabetes; Consultant, Abbott Diabetes Care
  – Presenter: Alison Evert, MS, RD, CDE – Consultant, Abbott Diabetes Care

• Non-Endorsement of Products:
  – Accredited status does not imply endorsement by AADE, ANCC, ACPE or CDR of any commercial products displayed in conjunction with this educational activity

• Off-Label Use:
  – Participants will be notified by speakers to any product used for a purpose other than for which it was approved by the Food and Drug Administration.

Learning Objectives

At the conclusion of this presentation learners will be able to:

• Discuss different eating patterns that may be used for the management of diabetes.
• Discuss strategies for evaluating eating plans for diabetes.
• Outline strategies for discussing low carbohydrate, ketogenic, intermittent fasting and Mediterranean eating plans for diabetes management.
How Are Nutrition Recommendations Developed?

ADA Nutrition Consensus Report
Alison B. Evert
Michelle Dennison
Christopher D. Gardner
W. Timothy Garvey
Ka Hei Karen Lau
Janice MacLeod
Joanna Mitri
Raquel F. Pereira
Kelly Rawlings
Shamera Robinson
Laura Saslow
Sacha Uelmen
Patricia B. Urbanski
William S. Yancy Jr.

Must have bookmarked pages for all diabetes educators!

- ADA Practice Guideline Resources: [https://professional.diabetes.org/content-page/practice-guidelines-resources](https://professional.diabetes.org/content-page/practice-guidelines-resources)
- Nutrition Consensus Report: [http://care.diabetesjournals.org/content/early/2019/04/10/dci19-0014](http://care.diabetesjournals.org/content/early/2019/04/10/dci19-0014)
- ADA SOC Lifestyle Section: [http://care.diabetesjournals.org/content/42/Supplement_1/S46](http://care.diabetesjournals.org/content/42/Supplement_1/S46)
AE1  Patti - add link to AADE practice guideline/Cecelia
Alison Evert, 6/10/2019
Eating Pattern Options for Diabetes

<table>
<thead>
<tr>
<th>Type of eating pattern</th>
<th>Description</th>
<th>Potential benefits: diabetes, weight loss, cardiovascular health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mediterranean diet (MED)</td>
<td>Emphasis on fruits, vegetables, whole grains, legumes, nuts, and healthy fats.</td>
<td>Reduced risk of diabetes, improved cardiovascular health.</td>
</tr>
<tr>
<td>Healthy eating plan (HEP)</td>
<td>Focus on nutrient-dense foods, such as fruits, vegetables, lean protein, and whole grains.</td>
<td>Weight loss, improved cholesterol levels.</td>
</tr>
<tr>
<td>Mediterranean-style diet (MSD)</td>
<td>Combination of Mediterranean and healthy eating plan principles.</td>
<td>Comprehensive benefits of both diets.</td>
</tr>
</tbody>
</table>

Case Studies

What do I do when a patient wants to follow a certain eating plan?

Wade wants help with an eating plan

- 56 YO M, newly-diagnosed T2D during Merchant Marine physical
- PMH includes HTN, hyperlipidemia, predb for past 3 years
- BMI 32.1, A1c 8.1%, BP 156/88, cholesterol labs WNL, triglycerides 391
- Owns a construction company, works long hours, lives with his wife
Print copies of case study slides to handout at the session - speaker with BRIEFLY review each case

find out room size
Wade, continued

- Has already purchased elliptical machine and joined fitness club
- Over the past week has eliminated almost all CHO in his eating
  - Low CHO protein shake for breakfast and lunch
  - Meat and vegetables for dinner
  - Eliminated 5 to 6 craft beers per night

Wade, some more

- Has initiated metformin 1000 mg daily, will increase to 1000 mg BID in 1 week
- Wade hates taking medications
- He wants to follow a very low carb diet and be able to stop metformin

What would you discuss with Wade?

Marilyn wants help with an eating plan

- 72 yo F, new dx T2D; A1c 6.8%, BMI 27. HTN, elevated LDL-chol and TG, CAD with h/o 3-Vessel CABG
- PCP would like her to try to work on her diet and become more active before initiating metformin
- Social: Retired physician, lives alone. No regular physical activity but “dodders around” in her yard and community garden.
Should we remove the questions at the bottom or leave? Or have one summary question slide for all three cases?

Alison Evert, 6/10/2019
Marilyn, additional history
Marilyn remembers learning about low fat diets for weight loss when she was in residency, has been considering this.

She has read articles about the Mediterranean-style eating pattern, she has always enjoyed Middle Eastern food.

However, her daughter is on the ketogenic diet and insists this will work for Marilyn’s new diagnosis of diabetes.

Marilyn shares she used to enjoy cooking, but difficult to do just for one person; raised 3 children and is enjoying retirement. Wouldn’t mind cooking again as long as the recipes/meals are simple.

Marilyn: Case Questions?
• What nutrition education interventions would you recommend for this eating pattern?
• What about waiting to start Metformin – would you have any feedback for the provider OR Marilyn?

Joan wants help with an eating plan too
• 57 yr old female; single; BMI: 35; HTN; newly diagnosed with T2D, A1C 9.8%
• Anti-hyperglycemic agents: just started - glimiperide 4 mg q am, metformin 1000 mg BID
• Blood Pressure medications: HCTZ and just started ACE inhibitor
There is not one Med-diet, preferable terminology, med-style eating pattern
What eating plan for Joan?

- Makes it very clear – she doesn’t want to count calories or spend time meal planning
- Doesn’t ever eat breakfast, rarely eats lunch
- Asking your advice on intermittent fasting weight loss program she read about online

Joan: CASE QUESTIONS

- What nutrition education interventions would you recommend for this eating pattern?
- What type of intermittent fasting plan?
- Would you make any recommendations to Joan about her anti-hyperglycemic agents or HTN meds during her fasting day or in general?

Eating Plans: Diabetes & Prediabetes
Mediterranean-style

- Emphasizes
  - Plant-based foods
  - Fish, seafood
  - Olive oil
  - Yogurt/cheese in low to moderate amounts
  - Typically fewer than 4 eggs per week
  - Rare red meats, concentrated sugars, honey
  - Low to moderate amounts of wine

Evidence to support Mediterranean eating plan

- Mixed effect on A1c, weight and lipids in 6 RCTs, reduced Db risk\(^1\)
- Lowest A1c seen with Mediterranean, low CHO eating plan (28% energy from CHO) vs Med, kcal restricted or low fat, kcal restricted plans\(^2\)
- No type 1 diabetes trials met inclusion criteria

Vegetarian/vegan eating plans

- Devoid of all flesh foods
- May include dairy (lacto) and egg (ovo) products
- Vegan: Devoid of all flesh foods and animal-derived products
Evidence to support Vegetarian/Vegan eating plans

- 6 type 2 diabetes studies, duration 12 to 74 weeks: mixed results for glycemia and CVD risk
- Most studies reported weight loss

Evert AB et al. Diabetes Care 2019;42(5):731-754

Vegetarian/Vegan evidence, continued

- 2 meta-analyses (T2 DM)
  - A1c decreased 0.3 to 0.4%
  - Weight decreased 2 kg
  - Waist circumference, LDL-C, non-HDL-C decreased
- No type 1 diabetes studies met inclusion criteria

Evert AB et al. Diabetes Care 2019;42(5):731-754

Low-carbohydrate eating plans

- No consistent definition
- Consensus report: 26 to 45% of total calories
- Emphasizes
  - Low-carbohydrate vegetables
  - Some low carbohydrate fruits
  - Meats, poultry, fish/seafood, eggs, cheese, nuts and seeds
  - Fats

#AADE
Very low-carbohydrate eating plans

- <26% of kcal from carbohydrate
- Often has a goal of 20 to 50 g of nonfiber carbohydrate: "keto" diets

Evidence for LC and VLC plans: Meta-analysis of 25 T2 DM RCTs

- A1c difference when <26% kcal from CHO:
  - -0.47% at 3 mos
  - -0.36% at 6 mos
  - No difference at 12 or 24 months
- No A1c difference when CHO was 26 to 45% of kcal

LC and VLC evidence continued: Meta-analysis of 36 Type 2 DM RCTs

- A1c
  - -1.38% up to 8 weeks
  - -0.36% up to 1 year
  - No difference at 2 years
- Small improvements in triglycerides, HDL-C
- No difference in weight, LDL-C, BP, QOL
AE [23]1  Show table from the consensus report?
Alison Evert, 6/10/2019
LC and VLC evidence continued:
Meta-analysis of 10 T2 DM RCTs

A1c
• 0.34% lower in LCD compared to HCD
• Greater restriction in CHO resulted in greater A1c reduction
• No difference at 1 year between LCD and HCD
• No difference in BMI/weight, LDL-C, QOL

Snorgaard O et al. BMJ Open Diab Res and Care 2017;5:e000354

VLC evidence for type 1 diabetes
• Limited evidence!
• 10 participants followed VLC plan for 1 week and high CHO plan for 1 week
  – Less glycemic variability
  – More time in euglycemia
  – Less hypoglycemia


VLC evidence for type 1 diabetes, continued

Single-arm study, 48 participants, goal 75 g CHO/d
• 3 months: lower A1c, triglycerides, weight; increased HDL-C
• 4 years: A1c still reduced (-1.8% in 27% of participants who were following VLC plan), HDL-C still increased

DASH Eating Plan Definition
Emphasizes
• Fruits and vegetables
• Low-fat dairy
• Whole, intact grains
• Poultry, fish, nuts
• Reduced saturated fat, red meat, sweets, SSB
• May be reduced sodium

Evidence for DASH eating plan: T2 DM
• 2 RCTs, 40 and 44 subjects
• 8 week study: improved A1c, BP, cholesterol, weight
• 4 week study: lower BP; no difference in A1c, weight, lipids

Azadbakht L et al. Diabetes Care 2011;34:55-57
Paula TP et al. J Clin Hypertens 2015;17:895-901

PALEO?
Patti - if you include DASH - would you also include 1 slide on Paleo?
Alison Evert, 6/10/2019
Intermittent Fasting

Intermittent Fasting
Key Methods

5:2
Normal eating 5 days a week. Two fasting days of 500-600 calories.

24-Hour
No food for 24 hours. 1-3 days per week.

Time-Restricted
Consume day’s calories during an 8-12 hour block each day, fast the remaining 12-16 hours.

Intermittent fasting eating plans

Variety of approaches

- Restricted food intake for 18 to 20 hours per day
- Alternate-day fasting
- Severe calorie restriction for up to 8 days or longer

Intermittent fasting evidence

- 4 studies with participants with T2 DM
- 3 studies:
  - Weight loss
  - No A1c improvement compared to controls
- 1 study:
  - Similar A1c, weight and medication reductions compared with chronic energy reduction group

Evert AB et al. Diabetes Care 2019;42 (5):731-754
Will contact Courtney Peterson see if she is willing to share her slide? Use this now?
Alison Evert, 6/10/2019

Replace with Courtney slide?
Alison Evert, 6/12/2019
Eating Pattern Evidence for Prediabetes

- Most widely studied eating plans
  - Mediterranean-style – 30% lower relative risk
  - Low-fat: U.S. DPP, Finnish Diabetes Prevention, Da Qing IGT – reduced risk and decreased incidence
  - Low carbohydrate: Epidemiologic studies

- Epidemiological studies
  - Mediterranean, vegetarian, DASH – reduced Db risk
  - Low carbohydrate – no effect

Evert AB et al. Diabetes Care 2019;42(5):731-754

Let’s Talk About the Cases

- Wade
- Marilyn
- Joan

Person-Centered Care

- Need to talk about options with all our clients/patients
- Then conduct nutrition assessment to determine what is he/she/they able to do
- Eating plan will be easier to follow if the person chooses it, not you
AE [22]1  Beginning of case
Alison Evert, 6/10/2019
Individualizing the nutrition education session

- What's the evidence?
- Describe foods and beverages commonly consumed in this eating pattern
- Nutrient considerations, pros/cons, cost, etc.
- Discuss how the person could plan and prepare meals
- Role of physical activity
- Medication adjustments
- Resources and recipes

Wade: Low Carb or Very Low Carb?

<table>
<thead>
<tr>
<th>Meal</th>
<th>Foods</th>
<th>Carbohydrates (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast</td>
<td>2 hard cooked eggs, 1 medium tomato, sliced, ½ medium avocado</td>
<td>1</td>
</tr>
<tr>
<td>Lunch</td>
<td>4 cups lettuce, 10 mini carrots, 1 cup chopped red pepper, 6 cherry tomatoes, 1 oz shredded cheddar cheese, 2 Tbsp olive oil, 2 Tbsp cider vinegar, 6 oz grilled chicken breast</td>
<td>24</td>
</tr>
<tr>
<td>Dinner</td>
<td>5 oz salmon portion, 2 cups broccoli roasted with 2 Tbsp olive oil</td>
<td>0</td>
</tr>
<tr>
<td>Snacks</td>
<td>2 oz raw almonds, 1 cup fresh raspberries</td>
<td>12</td>
</tr>
</tbody>
</table>

Total: 75g carbohydrates

Energy: 2078 kcal, 152 g fat, 129 g protein
(14% energy from CHO)
What about the Ketogenic Diet

• Usually defined as
  • High fat:
    o typically 65-80% of total kcal
  • Moderate protein: 0.8-1.2 g/kg IBW
    o 15-25% of total kcal
  • Low in carbohydrate: < 50 g (30 to 50 g per day)
    o 5-15% of total kcal
    o glycemic index <50

KETO Food Choices

• INCLUDE
  – Vegetables low in carbs such as greens, broccoli, cauliflower, cabbage, etc
  – Fats from animal foods, oils, butter, avocado, coconut, MCT oil
  – Protein: meat, poultry, fish, shellfish, eggs, some cheese, some nuts and seeds

• AVOID
  – Starchy foods such as pasta, rice, potatoes, bread, sweets
  – Dairy (with exception of plain Greek yogurt, cottage cheese)
  – Most fruit (some plans include fruits such as berries)
  – Sometimes coffee, tea
  – Dark chocolate, cocoa

Ketogenic Diet

DietDoctor website (1 of 95,000,000 hits)
A Balancing Act

- Pre-existing conditions
  - CKD
  - Pregnancy
  - Disordered eating
- Dehydration: with reduced intake of water-binding carbs, body less able to hold onto fluids, can be offset by eating more salt. However this may increase BP
  - Hydration is the key
  - Low carb researcher tip: divide body weight in half, resulting number is fluid goal (200 lbs ÷ 2 = 100 ounces ≈ 12 cups)

“Keto flu”

- Side-effect sometimes experienced after starting a ketogenic diet – can last a few days or week or two
- Can lead to symptoms such as, headache, fatigue, dizziness, muscle aches, constipation, nausea
- Typically short-lived – prevent or treat with increasing salt and water intake

RD perspective:

- Nutrient Considerations: without milk difficult to obtain calcium + vitamin D; increase leafy greens to provide vitamins A, C, K, and folate; role of potassium in healthy blood pressure
- Constipation: when choosing carbs, choose fiber-rich non-starchy vegetables
- Cost: protein sources often more expensive items vs pasta, rice, bread
- Adherence: as with any eating plan, ongoing support seems to be a key consideration
RD perspective:
• Online research trial\(^1\)
  • 27% did not report following a VLCD with diabetes provider
  • 49% felt their health care providers were supportive of LCD
• Fat Intake: intake of saturated fats often increases, choose heart-healthy mono- and polyunsaturated fats
• CVD Risk: important to assess baseline and re-evaluate
  • Often HDL increases, TG decrease and LDL increases
  • LDL increase due to increase in large, fluffy LDL particles?
  • If elevation of LDL referral to endo

\(^{1}\text{Lennerz BS et al. Pediatrics 2018;141(6)}\)

Medication Adjustment
• Need to be in close contact with patient
• In people with diabetes – monitor glucose
  • T2D
    • to reduce risk of hypoglycemia, reduce dose(s) of sulfonylureas and insulin
    • discontinue SGLT-2 inhibitors
  • T1D:
    • reduce doses of insulin
    • SGLT-2 inhibitors: may be contra-indicated with keto diet, may increase risk of euglycemic diabetic ketoacidosis
    • Hypertension: monitor BP, adjust meds as indicated

Resources for Type 1 Diabetes
www.facebook.com/Type1Grit/
AE [15]1  Not endorsement - tools
Alison Evert, 6/10/2019

AE [17]1  Move all resources to end and group eating pattern type
Alison Evert, 6/10/2019
Resources for Prediabetes or Type 2 Diabetes

www.dietdoctor.com/lchf-in-twelve-languages
www.youtube.com/c/DietDoctorVideo
www.reddit.com/r/keto
www.lowcarbprogram.com

Additional Resources

• www.lowcarbusa.org/science/clinical-guidelines/
• A clinician’s guide to inpatient low carbohydrate diets for remission of type 2 diabetes: toward a standard of care protocol (Diabetes Management (2019) Volume 9, Issue 1)
• www.lowcarbdietitian.com/
• https://ketodietapp.com/Blog/author/franziskaspritzler (Franziska Spritzler, RD, CDE)

Take-Away: Ketogenic – Low-carb diets

• Based on current studies, people with overweight/obesity, pre-diabetes, and T2D should receive individualized or group education and ongoing support from PCP and/or RD/RN medical staff
• While LC and Ketogenic diet trials reveal greater weight loss and improved glycemia at 6 months, larger, long-term trials are needed
• To date – no long-term studies have examined LC diet lowers one’s risk for CVD events or mortality
Nutrition advance + Alison (kept bible) and Erin to review, RD in Australia
Alison Evert, 6/10/2019
Which would be the best option for Marilyn? Based on her stated preferences, you share evidence about:

- Low Fat
- Mediterranean
- Ketogenic

You provide a brief evidence review:

- **Low Fat**
  - **LOOK AHEAD trial**: An intensive lifestyle intervention focusing on weight loss did not reduce the rate of CV events in overweight or obese adults with type 2 diabetes.

- **Mediterranean**
  - Some CVD risk reduction, results mixed

- **Ketogenic**
  - Currently no long term trials conducted to date looking at CVD risk

ADA Nutrition Consensus Report Diabetes Care 2019;42 (5):731-754

Based on the evidence and shared decision making Marilyn chooses:

- Low Fat
- Mediterranean
- Ketogenic
With Marilyn's baseline lipids elevated Med-style likely a better place to start? Need to perform baseline lipids, if lipids change (increase) after started kept - need to have lipids evaluated
Alison Evert, 3/6/2019
Factors Impacting Adherence:

- Higher socioeconomic status
  - Med-style eating pattern associated with lower CVD risk but relationship is confined to higher socioeconomic groups
  - In groups sharing similar scores of adherence to Med-style eating pattern, diet-related disparities across socioeconomic groups persisted


Other Factors:

- Time / Meal Preparation
  - Few “convenience” Mediterranean foods
- Stark difference from cultural eating patterns
  - ~93% of the world is not Mediterranean


Eat More Nuts, Legumes & Fish

- Use nuts, seeds, beans and legumes as primary protein source
- Eat fish twice a week (and other seafood)
- Eat dairy foods (mainly yogurt and cheese) in low to moderate amounts
- Eat red meat in low frequency and amounts
- Eggs – typically fewer 4 each week
Delete this slide but address cost and socio- on next slide

Alison Evert, 6/10/2019
Eat More Plant-based Foods

- Eat 5 or more servings of fruits and vegetables each day. In Mediterranean countries fruit is often the dessert for meals.
- Eat concentrated sugars and honey rarely.
- Eat 3 or more servings/ounces of whole intact grains each day.
- Focus is on quality of food choices.

Choose Healthful Fats

- Omega-3 fatty acids
  - Fatty fish: sardines, herring, salmon, tuna
  - Flaxseed oil
- Monounsaturated fat
  - Olive, peanut, canola oil
  - Avocados
  - Nuts and seeds
- Polyunsaturated fats
  - Safflower, sesame, soy, corn and sunflower-seed oils
  - Nuts and seeds

Choose the Right Olive Oil

- Look for extra virgin olive oil rather than refined olive oil.
- Extra virgin olive oil is the highest of all the grades and offers a minimum guarantee of quality.
- The USDA is working on new standards. New laws now exist in some states.
- The California Olive Oil Council (www.cooc.com) certifies oils as extra virgin.
- Avoid oil in transparent glass bottles (light and heat affect the oil). Choose dark green, metal or opaque containers.
- Read the label, there should be a date stamp (either date of harvest or use-by-date).

Choose Healthful Fats

- Omega-3 fatty acids
  - Fatty fish: sardines, herring, salmon, tuna
  - Flaxseed oil
- Monounsaturated fat
  - Olive, peanut, canola oil
  - Avocados
  - Nuts and seeds
- Polyunsaturated fats
  - Safflower, sesame, soy, corn and sunflower-seed oils
  - Nuts and seeds

Choose the Right Olive Oil

- Look for extra virgin olive oil rather than refined olive oil.
- Extra virgin olive oil is the highest of all the grades and offers a minimum guarantee of quality.
- The USDA is working on new standards. New laws now exist in some states.
- The California Olive Oil Council (www.cooc.com) certifies oils as extra virgin.
- Avoid oil in transparent glass bottles (light and heat affect the oil). Choose dark green, metal or opaque containers.
- Read the label, there should be a date stamp (either date of harvest or use-by-date).
Alcohol – Moderation is Key

Pair your drink with great food and healthful lifestyles:

– If you drink, have a moderate amount:
  – one drink a day for women;
  – two drinks a day for men.
– If you don’t drink, do not start now

One Drink is:

12 oz beer
4 oz wine
1.5 oz 80-proof spirits
1 oz 100-proof spirits

Other Key Aspects of This Eating Plan

• It has been shown that the order of the courses in a meal and the pattern of meals is strong
• Sharing of meals with family or colleagues and an absence of snacking
• Mid-day is the main meal
• Physically active lifestyle
• “Siesta”

Tessier S, Gerbere M. Appetite. 2005; 45:121-126

Bottom Line:

Mediterranean-style eating pattern is more than what you eat. It is a way of life that includes physical activity and includes social component.
Meal Planning Approach: using shared decision making

- Plan some meals together for the next 24 hours:
  - What could you eat for dinner tonight?
  - Breakfast tomorrow?
  - And Lunch?
- Next time you go shopping
  - How would you go about planning a few meals?

Recipes and Resources

- Oldways:
  - http://oldwayspt.org/traditional-diets/mediterranean-diet
- Live Well Mediterranean Diet
  - intermountainhealthcare.org/ext/Dcmnt?ncid=527023066
- www.Eatingwell.com -recipes
- American Diabetes Association:
  - www.diabetes.org - my food advisor
- American Heart Association:
  - http://www.heart.org/HEARTORG/HealthyLiving/HealthyEating/Recipes

Joan: Fasting Eating Plan?
AE [18]1  Add Maureen's resource per Patti
Alison Evert, 6/10/2019
Time Restricted Feeding (TRF)

• If feeding periods beginning after 4PM led to:
  • No results
  • Worse postprandial BG levels, beta cell responsiveness, blood pressure, and lipid levels

Carlson et al, 2007; Stote et al, 2007; Tinsley et al, 2007

Factors That May Impact Adherence

Variations of definitions make consistent research findings difficult
  • Number of fasting days vary in each study
  • Amount of calories vary in each study

Managing hunger & appetite on fasting days
  • “Rebound” overeating on “feasting” days
  • Social life

Bottom Line: What’s the Evidence

• Great variation in intermittent fasting study design, all were small in size
  • Short-term (< 6 months) trials report intermittent fasting can reduce body weight, improve insulin sensitivity, lower BP, improve lipid profiles, and reduce inflammation and oxidative stress
Meal Planning Approach: using shared decision making

Together with Joan – based on her chosen fasting approach:
• Plan some fasting meals AND non-fasting day meals together:
  – What could you eat for dinner tonight?
  – Breakfast tomorrow?
  – And Lunch?
• Next time she goes shopping
  – How would you go about planning a few meals?

Medication Adjustment for T2D

• Need to be in close contact for adjustments
• Increase self-blood glucose monitoring to advise medication adjustments on fasting and non-fasting days

Medication Adjustment Continued

• Risk of hypoglycemia in 41% of individuals with diabetes studied
  – Hypoglycemia risk 2x greater on fasting days (despite med adjustment & hypo education)
• Reduce medications on fasting days:
  – 50 to 70% if individuals eating <400 calories
  – If possible, eliminate use of hypoglycemic medication such as sulfonfonyureas on fasting days
  – Reduce insulin doses

Corley BT, et al. Diabetic Medicine. 2018; 35:
4 Step Approach to Starting a Nutrition Therapy Session

#1: What brought you here today?
- My goal – get the person talking so I can find out what they want to do.
- Answer also helps me to quickly determine readiness to change:
  - “My doctor said I had to come meet with you”
  - “I don’t know, I thought I was having a lab test”
  - “I asked my doctor for a referral to the dietitian”

#2: Before we get started with your nutrition session today, do you have a burning question for me?
- Answer helps me to determine if they have another agenda that is important to them.
- If they are concentrating their question instead of the nutrition session, my time with them might not be as effective.
- Over the years I am truly amazed by the answers:
  - I can’t get my meter to work
  - I can’t afford my medicine
  - Don’t understand how to use the new insulin pen
  - Where is the closest food bank?

#3: Is there an eating plan or diet you are interested in learning more about or one that you know you’d like to follow?
- Answer helps me to determine what they are interested in vs what I think they should do
4 Step Approach to Starting a Nutrition Therapy Session

#4: OH NO, I have never heard of the diet they want to follow, what do I do now?

- Is there evidence about use of this eating plan conducted in people WITH diabetes
- Conduct a PubMed

PubMed Search

Type ‘eating plan’ + ‘diabetes’
And remember

People with diabetes and prediabetes should be screened and evaluated during DSMES and MNT encounters for disordered eating, and nutrition therapy should accommodate these disorders.

Evert All et al. Diabetes Care 2019;42(5):731-754

Questions and Answers

Thank you!