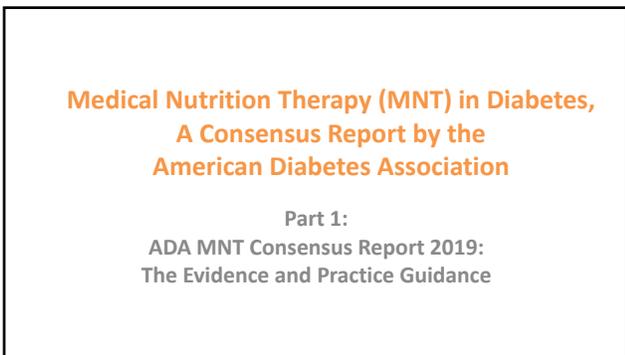




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Disclosure to Participants

- **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: Alison Evert, MS, RD, CDE – N/A
 - Presenter: Janice MacLeod, MA, RDN, CDE, FADE – Employee of Companion Medical
- **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.

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What's new in the 2019 Nutrition Therapy for Adults with Diabetes or Prediabetes Consensus Report?



- Prevention/Prediabetes
- Eating Patterns – such as Ketogenic and VLC, Intermittent Fasting and Very Low-fat (Ornish) and Paleo
- Emphasis on options for weight loss & management
- Diabetes Remission
- Gastroparesis
- Protein/Fat effect on insulin dosing
- Personalized nutrition
- Linking MNT to medical management – organization approved protocols
- Technology-Enabled tools

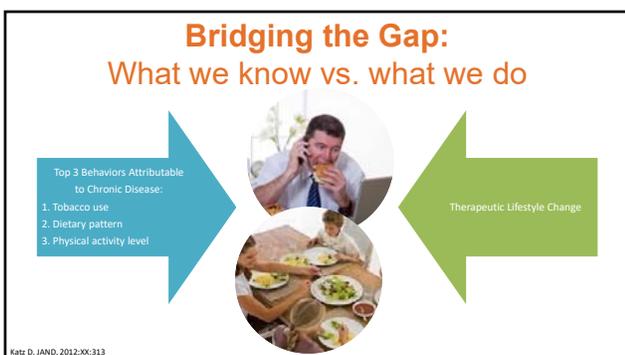
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Goals of nutrition therapy

To promote and support **healthful eating patterns**, emphasizing a variety of **nutrient-dense foods** in appropriate **portion sizes**. To improve overall health:
1) Improve A1C, BP, cholesterol levels
2) Achieve/maintain body weight goals.
3) Delay/prevent diabetes complications.

To address **individual** nutrition needs based on personal and cultural preferences, health literacy and numeracy, **access** to healthful food choices, **willingness and ability to make behavioral changes**, as well as barriers to change.

To maintain the **pleasure of eating** by providing positive messages about food choices while limiting food choices only when indicated by scientific evidence.

To provide the individual with diabetes with **practical tools** for day-to-day meal planning.

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Are nutrition and diabetes education interventions effective in improving outcomes?

Strong evidence supports the efficacy and cost-effectiveness of nutrition therapy as a component of quality diabetes care, including its integration into the medical management of diabetes;



Therefore it is important that all members of the health care team know and champion the benefits of nutrition therapy and key nutrition messages.

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Sorting through the acronyms

- MNT** • An evidence-based application of the nutrition care process by a registered dietitian nutritionist (RDN); the legal definition of nutrition counseling by an RDN in the U.S. *
- Healthy Eating** • A pattern of eating a wide variety of high quality, nutritionally-dense foods in quantities that promote optimal health and wellness. All healthcare professionals can provide guidance for healthy eating. *
- DSMES** • Encompasses the complex array of knowledge, skills, and abilities needed to maximize effective management; incorporates individual needs, goals, and experiences; is guided by evidence-based standards **
- Patient Education** • The simple transfer of information; occurs in a number of settings and is delivered by multiple providers. **

*AADE Practice Synopsis Healthy Eating, 2015
**AADE. The scope of practice, standards of practice, and standards of professional performance for diabetes educators, 2011

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Consensus Recommendations

- Refer adults living with type 1 or type 2 diabetes to individualized, diabetes-focused MNT at diagnosis and as needed throughout the life span and during times of changing health status to achieve treatment goals. **Coordinate and align the MNT plan with the overall management strategy, including use of medications, on an ongoing basis.**
- Diabetes-focused MNT is preferably provided by an RDN who has comprehensive knowledge and experience in diabetes care.
- Diabetes MNT is a covered Medicare benefit and should be adequately reimbursed by insurance and other payers, or bundled in evolving value-based care and payment models.

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Consensus Recommendations



Refer adults with diabetes to comprehensive diabetes self-management education and support (DSMES) services according to national standards.

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Is MNT clinically and cost effective?

Reported A1C reductions from MNT are similar to or greater than what would be expected with treatment using currently available medication treatments for T2D.

Research supports the effectiveness of MNT interventions provided by RDNs for improving A1C with absolute decrease up to 2.0% in T2D and up to 1.9% in T1D at 3-6 months.

Multiple studies document the cost effectiveness for MNT for the prevention and management of diabetes.

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How should MNT be implemented?

Initial series of MNT encounters: 3-6 during the first 6 months following diagnosis; follow-up per assessment

MNT Follow-Up Encounters: Minimum of one annual MNT follow-up encounter

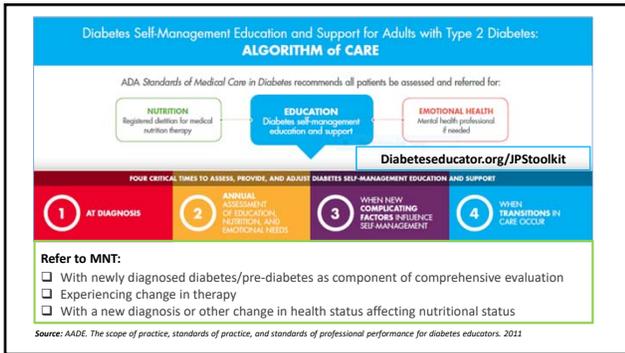
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Key Considerations

- One-Size-Fits-All does not fit
- Not once and done but continuous and evolving
- Must be aligned with medical management
- CHW/Peer Coach for ongoing support
- Technology-enabled solutions needed to extend access and reach
- Digital health enables data-driven, on-demand encounters virtually or FTF

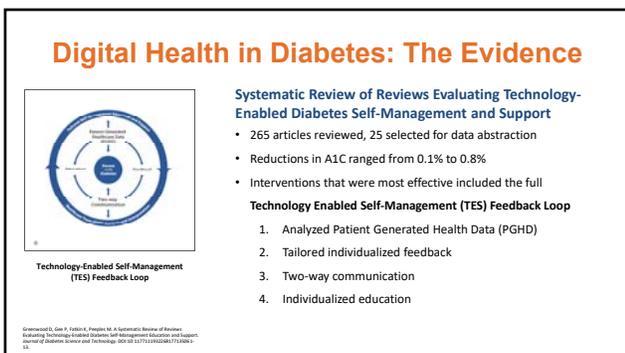
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- Reducing barriers to referrals
- MNT integrated with Medical Management and embedded at the POC
- Technology-enabled
- Use of CHW/Peer coaches to facilitate ongoing support
- Higher quality research
- Ongoing cost-effectiveness research

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Hope To Answer The Question For Those Who Seek Our Care: What Can I Eat?

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Issues with Nutrition Research

- Large, rigorous clinical trials lacking
- Most studies short-term
- Controlling intervention arms difficult &/or costly
- Can study outcomes be implemented long-term?

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To Complicate Matters....

- Nutrition recommendations change over time, just like other fields of medicine.

"It is easier to change a man's religion than his diet."

Margaret Mead, anthropologist

For example:



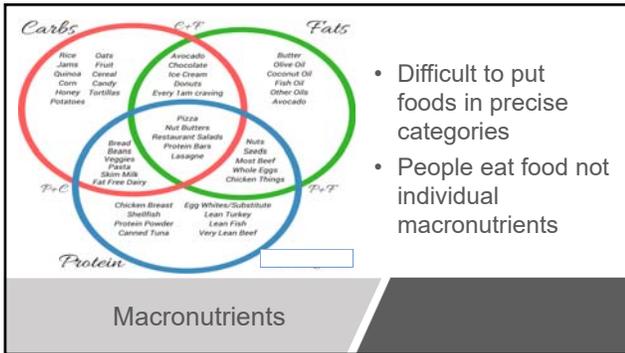
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Consensus Recommendations

- Evidence suggests that there is not an ideal percentage of calories from carbohydrate, protein, and fat for all people with or at risk for diabetes, therefore macronutrient distribution should be based on an individualized assessment of eating patterns, preferences, and metabolic goals.

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- Difficult to put foods in precise categories
- People eat food not individual macronutrients

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Macronutrients:
“What Do You Notice?” Emmy Suhl, MS, RD, CDE
 DCE: *On the Cutting Edge*¹

- What happens after you eat a meal or a particular food to your glucose?¹
 - Less about rules and formulas, more about “trial and error”
 - Important to develop individualized troubleshooting skills
- Glucose monitoring²
 - Valuable tool for assessing food, activity, and medications when data used for decision-making.
 - Can provide insights into the influence of macronutrients on meal-time glucose response. ²Lyons L, et al. ADA Guide to Diabetes Nutrition Therapy, 3rd Edition, 2017

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Macronutrients:
“What Do You Notice?” Emmy Suhl, MS, RD, CDE
 DCE: *On the Cutting Edge*

- What would you do differently next time?
 - Change an amount?
 - Change an ingredient?
 - Enjoy the food or meal, understanding how it impacts glucose?

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Eating Plans to Manage Prediabetes and Reduce Risk of Type 2

- Most robust research: Mediterranean-style (Med-style), low-fat, and low-carb
- PREDIMED trial, compared Med-style vs low-fat, found 30% lower relative risk with the Med-style
- Epidemiologic studies correlate Med-style, vegetarian, DASH eating plans with lower risk, with no effect for low carb
- Given limited evidence, unclear which eating plan is best

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Eating Plans to Manage Type 2 Diabetes

- Evaluated in ADA Report:
 - Mediterranean-Style
 - Vegetarian or Vegan
 - Low-fat
 - Very-Low Fat Ornish or Pritikin
 - Low-Carb & Very-Low Carb
 - DASH
 - Intermittent Fasting
 - Paleo

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Guiding Principles

- Emphasize non-starchy vegetables.
- Minimize added sugars and refined grains.
- Choose whole grains over highly processed foods to the extent possible
- *What the individual is able to follow*

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- Bottom line: Evidence does not support a clear preference for a specific eating pattern

Diabetes Care. 2019; 42(5):731-754
MacLeod J, et al. JAND. 2017; 117:1637-1658

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Consensus Recommendations

Refer people with prediabetes and overweight/obesity to an intensive lifestyle intervention program that includes individualized goal-setting components, e.g. DPP

36

SETTING REALISTIC EXPECTATIONS

- 45 million Americans go on diets every year, most fail to meet their goals
- Unfortunately our goals and our patient goals – may be unrealistic

The Science of Obesity Management: An Endocrine Society Scientific Statement: Endocrine Reviews. 2018, 39(2):1-54

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In Type 2 Diabetes, For Individuals That Are Overweight Or Obese

- At least 5% weight loss is recommended to achieve clinical benefit. *Benefits are progressive too!*
- Goal for optimal outcomes 15% or more when needed and can be feasibly and safely accomplished.

Diabetes Care. 2019; 42(5):731-754

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For Individuals that are Overweight or Obese

In prediabetes, the goal is 7%-10% for preventing progression to type 2 diabetes.

In type 1 diabetes, weight management is recommended part of care

Diabetes Care. 2019; 42(5):731-754

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As a frame of reference: 7% (or) 15% Weight Loss

If Current Weight Is ...	Then 7% (or) 15% is ...
160 lbs	11 lbs / 24 lbs
180 lbs	13 lbs / 27 lbs
200 lbs	14 lbs / 30 lbs
240 lbs	17 lbs / 36 lbs
260 lbs	18 lbs / 39 lbs
280 lbs	20 lbs / 42 lbs

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Additional Weight Loss & Maintenance Take-aways

Focusing on moderating portion sizes
(reduced energy intake)

Aiming for a 'collaborative effort'
between healthcare providers and
people with diabetes to reduce weight.

Combining weight loss programs with
more physical activity.

Diabetes Care. 2019; 42(5):731-754

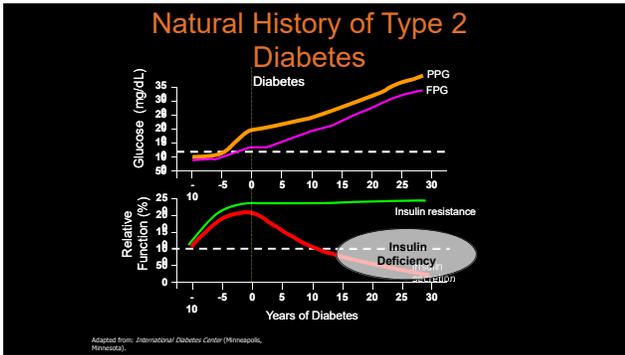
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Progressive Nature of T2D

- Because of the pathophysiology of type 2 diabetes:
 - β -cell decline
 - Insulin resistance
- "Diet & exercise" don't fail
- It's not a personal failure, it's a pancreatic failure



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Diabetes Remission

- Evidence indicates that intensive lifestyle interventions that result in $\geq 5-10\%$ of body weight, have varying rates of diabetes remission
 - studies in T2D report reduction at $\sim 60\%$
- Remission defined by ADA in report, glucose in prediabetes range and no diabetes medications for up to one year



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Until Evidence Strengthens Focus On:
Lifestyle intervention strategies with ongoing support – in person or online
What the person is able to follow

45

Resources

- Beck J, Greenwood DA, Blanton L, Bollinger ST, Butcher MK, Condon JE, Cypress M, Faulkner P, Fischl AH, Francis T, Kolb LE, Lavin-Tompkins JM, MacLeod J, Maryniuk M, Mensing C, Orzeck EA, Pope DD, Pulizzi JL, Reed AA, Rhinehart AS, Siminerio L, Wang J; 2017 Standards Revision Task Force. 2017 National Standards for Diabetes Self-Management and Support. *Diabetes Care*. 2017; 40(10):1409-1419, Jul 28. pii: dci170025.
- Franz MJ, MacLeod J, Evert A, Brown C, Gradwell E, Handu D, Reppert A, Robinson M. Academy of Nutrition and Dietetics Nutrition Practice Guideline for Type 1 and Type 2 Diabetes in Adults: systematic review of evidence for medical nutrition therapy effectiveness and recommendations for integration into the nutrition care process. *J Acad Nutr Diet*. 2017;117(10):1659-1679.
- MacLeod J, Franz, MJ, Handu D, Gradwell E, Brown C, Evert A, Reppert A, Robinson M. Academy of Nutrition and Dietetics Nutrition Practice Guideline for Type 1 and Type 2 Diabetes in Adults: nutrition intervention evidence reviews and recommendations. *J Acad Nutr Diet*. 2017;117(10):1637-1658.
- Powers MA, Bardsley J, Cypress M, et al. Diabetes self-management education and support in type 2 diabetes: a joint position statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. *Diabetes Care* 2015;38:1372-1382.
