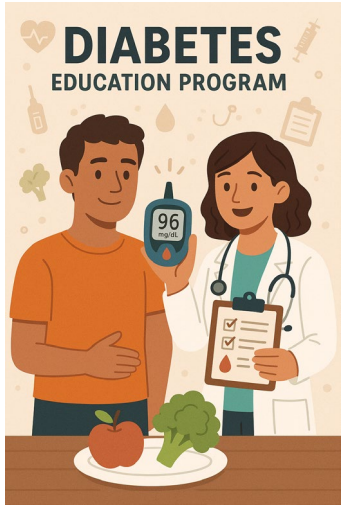
Living Well with Diabetes
Education Program

For delivery to nonpregnant adults with type 2 diabetes by trained, supervised staff when an accredited diabetes self-management and education program is not available[1].



[1]Not available – e.g., not covered by insurance, not affordable, too far away, inconvenient times, lack of ability to participate by telehealth

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Front Matter

- ✓ Purpose Statement
- ✓ Acknowledgements
- ✓ Disclaimers
- ✓ Additional Information – Clarifications, Cautions, Orientation, Terminology, Acronyms & Abbreviations

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Purpose Statement

This diabetes education program offers a flexible option for healthcare and other organizations to deliver diabetes education by trained, supervised staff, especially in settings where access to accredited diabetes self-management and education (DSMES) trainings or certified diabetes care and education specialists (CDCES) is limited.

By recruiting and training staff, this diabetes education program helps bridge this gap and empowers adults with type 2 diabetes to strengthen their knowledge, build their self-confidence and efficacy, and manage their condition effectively.

"There is also continued and growing evidence for the role of community health workers, peer educators, peer support, and lay leaders in providing ongoing diabetes self-management support."

Standards of Care in Diabetes – 2025. ADA.

Note that Medicare covers Diabetes Self-Management Training (DSMT) and Medical Nutrition Therapy (MNT) for people with type 1 or type 2 diabetes as do some commercial insurers and state Medicaid agencies. If insurance will cover DSMT and/or MNT and the patient can afford the deductible and co-pay, consider referring the patient to a person or entity who meets the current requirements and is accredited to deliver DSMT/MNT. **Medicare allows delivery of both DSMT and MNT by telehealth**.

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ACKNOWLEDGEMENTS

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Send feedback or corrections on the Living Well with Diabetes Education Program to info@NRTRC.org

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DISCLAIMER

This diabetes education program content is not a substitute for an accredited diabetes self-management education and support (DSMES) program that is taught by a credentialed educator. If such a program is available and accessible for an individual with type 2 diabetes, **it is the preferred option**.

Note that accredited and recognized DSMES programs[1] are reimbursed by Medicare, many private health plans, and some state Medicaid agencies, which is why we note that those types of programs are the preferred option, if the participant has the insurance coverage.

If an organization opts to use these materials to deliver diabetes education, there is not a pathway for payment or reimbursement if the content is delivered by trained and supervised staff that are not licensed or credentialed/certified.

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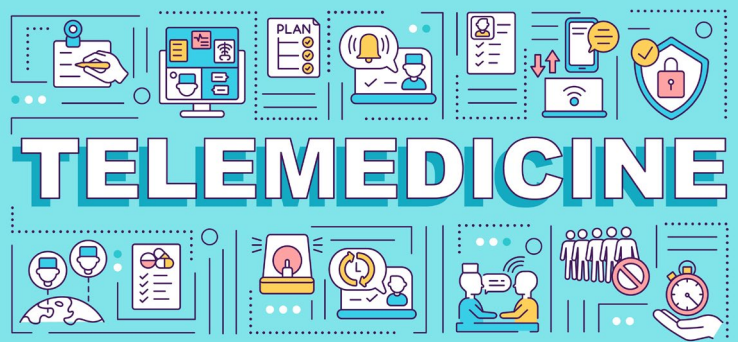
Diabetes Education Programs
A Few Clarifications – DSMT & MNT



Diabetes Self-Management Training (DSMT) is a covered Medicare benefit. Specific conditions and eligibility criteria apply[1].
Initial 10 hours then 2 hours per calendar year.

Medical Nutrition Therapy (MNT) is also covered by Medicare and is subject to requirements as well.
Initial 3 hours then 2 hours per calendar year.

CMS has allowed DSMT (since 2001) and MNT (since 2006) to be **provided via telehealth**, including insulin injection training, with certain restrictions.

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Diabetes Education Programs
A Few Clarifications - DSMES

Diabetes Self-Management Education and Support (DSMES)

- ✓ When capitalized, Diabetes Self-Management Education and Support (DSMES) refers to a **structured and well-respected program** that is either accredited by the American Diabetes Association (ADA) or recognized by the Association of Diabetes Care and Education Specialists (ADCES).
- ✓ Qualified instructors include: registered nurse (RN), registered dietician nutritionist (RDN), pharmacist or other health professionals holding state licenses or certifications with training and experience in diabetes care and education.
- ✓ The ADA and the ADCES ensure that DSMES services meet six required standards by based on the latest edition of the *National Standards for Diabetes Self-Management Education and Support*.

Diabetes self-management education and support (DSMES) can also be a general term for diabetes education services when used in lowercase.

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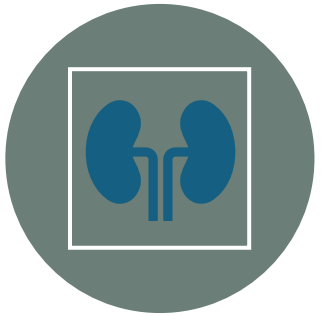
Content-Specific Cautions

Due to clinical safety considerations, this training excludes recommendations concerning insulin use or dosage.

Participants requiring education or guidance around insulin should be referred to an appropriately licensed and/or credentialed person (e.g., healthcare provider, pharmacist, registered nurse).

Similarly, unless the staff member is adequately trained in technology-enabled diabetes self-management solutions (e.g., continuous glucose monitors (CGM), closed-loop pump systems, and connected glucose meters), this specific training should be completed by appropriately trained licensed and/or credentialed staff.



Staff who receive training and demonstrate proficiency may be allowed to provide education on fingerstick blood glucose monitoring.

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ORIENTATION

The content is designed to be **practical, accessible, and streamlined, focusing on key points and information** that is helpful for adults with type 2 diabetes.

To avoid overwhelming or distracting either the participant or the educator, **the content has been simplified and streamlined to eliminate extraneous information**.

The information has been **crafted to be approximately at an eighth-grade reading level** to promote understanding and engagement

These slides are **created with flexibility for easy modification and adoption**, including for group classes, one-on-one sessions, or virtual settings.

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ORIENTATION (CONTINUED)

Seven self-care behaviors

1. Healthy Eating
2. Being Active
3. Taking Medication as Prescribed
4. Monitoring
5. Reducing Risks of Complications
6. Healthy Coping with Diabetes and Emotional Well-Being
7. Problem Solving to Find Solutions and Take Action

Understanding the Disease Process and Treatment Options*

- The topics in the following slides are aligned with the ADCES7 from the Association of Diabetes Care & Education Specialists (ADCES).
- The ADCES7 includes seven self-care behaviors that are the most commonly cited framework for diabetes self-management education and support (DSMES).

The ADCES website has numerous resources and participant handouts in Chinese, English, French, Spanish, and Tagalog.

*This is sometimes bundled or implied, but in many full DSMES trainings, it's a distinct area.

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TERMINOLOGY

- **Educator** → The individual who partners with the participant to provide diabetes education and self-management support
- **Participant** → The person with type 2 diabetes that is engaged in the diabetes education program
- **Provider** → For the purposes of this diabetes education program, a provider refers to a licensed healthcare professional authorized to diagnose, treat, and manage medical conditions. This includes, but is not limited to, physicians (MD/DO), nurse practitioners (NP), and physician assistants (PA).
- **Person-first language** → Use language that emphasizes the individual before the condition. For example, say “person with obesity” instead of “obese person” and “person with diabetes” instead of “diabetic” or “diabetic person”[1].
- Avoid terms like noncompliant or nonadherent.

1. 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025. ADA.

Acronyms & Abbreviations

- A1C – hemoglobin A1C
- ACE-I – angiotensin-converting enzyme inhibitor
- ADA – American Diabetes Association
- ARB – angiotensin receptor blocker
- CDC – Centers for Disease Control and Prevention
- CKD – chronic kidney disease
- CMS – Centers for Medicare & Medicaid Services
- CVD – cardiovascular disease
- DSMES – diabetes self-management and education support
- DSMT – Diabetes Self-Management Training (Medicare)
- DO – Doctor of Osteopathic medicine
- e.g. – for example
- EHR – electronic health record
- ESKD – end-stage kidney disease
- MD – Doctor of Medicine
- mmHG – millimeters of mercury
- NP – nurse practitioner
- PA – physician assistant
- RDN – registered dietician nutritionist
- SGLT2 – sodium-glucose cotransporter 2
- T2D – type 2 diabetes
- UACR – urine albumin-to-creatinine ratio

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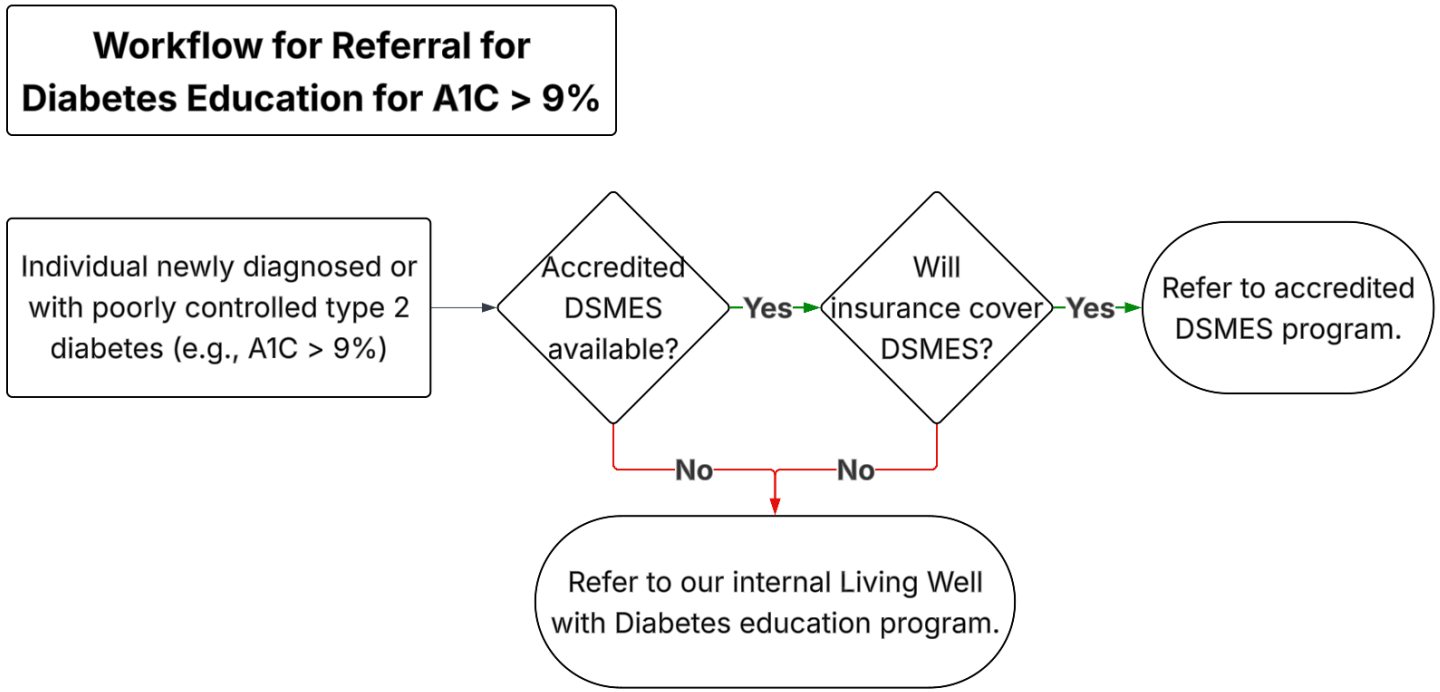
Operational & Implementation Considerations[1]

Before launching the Living Well with Diabetes Education Program, we strongly encourage reviewing the companion document that includes the following topics.

- Communication with Staff
- Documentation
- Back-Up Plan for Educators
- Workflow Considerations
- HIPAA Privacy and Security Training
- Quality Improvement & Quality Assurance
- Reimbursement

1. Operational and Implementation Considerations.

OPERATIONAL & IMPLEMENTATION CONSIDERATIONS



Living Well with Diabetes Education Program

Orientation for Educators

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Overarching Goals of the Program

- Foster a respectful, supportive environment where participants feel safe to learn and share without judgment, blame, or shame.
- Provide essential diabetes education to address key knowledge gaps and help participants better understand their condition.
- Collaborate with participants to develop realistic, personalized self-care behaviors and goals that support lasting lifestyle and other changes such as
  - Making healthy food choices
  - Achieving and maintaining modest weight loss (3%-7%) if overweight or obese
  - Engaging in recommended levels of physical activity.
  - Obtaining recommended follow-up, screenings, tests, and other care.

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Guidance for Educators

- If you are new to presenting this information, know that you are not expected to know everything at this point! It's okay to tell a participant "I don't know" or "I'm not sure" and "I'll find out and get back to you".
- With experience, you will find your own way to do this well.
- Know that people often **need to hear something seven times in seven different ways before it truly sinks in**. It's okay to repeat information, to ask participants to share their understanding, and to use handouts and videos to present the information in different ways.
- You will likely find resources on your own that work best for you and your participants.

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Considerations For Educators

- Request that providers specify what to focus on, whenever possible, when they send a participant to you for diabetes education.
- To strengthen your approach as an educator, we strongly recommend reading the section Person-Centered Collaborative Care from Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025.

Telehealth for Diabetes More from the ADA

- Telehealth and other virtual tools can expand access to diabetes self-management education and clinical support by **overcoming geographic and transportation barriers - especially for people living in underresourced areas or those with disabilities**.
- To fully realize the benefits of telehealth for diabetes care, it's essential to **anticipate and address challenges such as internet access, affordability, digital literacy, and the capacity of both patients and healthcare systems to integrate virtual care** into existing services.

1. Improving Care and Promoting Health in Populations: Standards of Care in Diabetes—2025. ADA.

ADA 2025 Standards of Care: Telehealth and Digital Tools

The ADA highlights strong evidence supporting the use of telehealth - including video visits, mobile apps, web portals, text messaging, digital coaching, and remote monitoring to improve:

- Access to diabetes care and education
- Glycemic control (A1C)
- Blood pressure management (hypertension)
- Lipid management (dyslipidemia/cholesterol)

"…outcomes that are comparable to or even better than those seen with traditional in-person care."[1]

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

Virtual Delivery Options

- **Audio-visual, audio only, text** → effective way to reach more participants by overcoming social and other barriers that prevent joining diabetes education sessions
- **Video conferencing** – may be able to look at food the participant eats and provide targeted information and advice
- **Telephone or even texting**!
- Must be HIPAA-compliant
- Accommodates participant preferences, addresses barriers, and improves satisfaction.

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NOTES TO EDUCATORS

- Begin with an initial assessment. This can be a form[1] that you use or a set of questions you ask to learn more about the participant, where their knowledge gaps may lie, and what they are open to working on.
- Partner with the participant to focus on one to three areas to work on to increase knowledge, find strategies to help with managing diabetes and/or identify positive lifestyle changes the participant would like to explore.
- Ideally, you and the participant will personalize a goal-driven plan together.
- Use technology, handouts, logs, low-tech teaching tools (like a set of plastic cup measures), and whatever you can to help with this process.

1. Create a version of this Participant Assessment Form from the ADCES website. Use ADCES' DSMES Assessment Template (PDF), which guides a comprehensive intake covering demographics, medical history, learning needs, self-care behaviors, psychosocial factors, and readiness to change.

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Prep Before for Sessions

- Review the participant's chart in advance, if possible.
- Make a note of the latest clinical visit, dental visit, A1C, BP, cholesterol panel, eGFR and UACR (kidney health), eye exam, foot exam

- Review the problem and medication lists

- Review the social history where you may find smoking status, alcohol or drug use, living situation, education level, and more.

- Consider in advance if it is helpful to ask
  - How long have you had diabetes?
  - Have you participated in diabetes education before? If yes, how did it go?

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Side Note - Vaccinations

- "Provide routinely recommended vaccinations for children and adults with diabetes as indicated by age"[1]
- If you discuss vaccinations with the participant, refer to
  - Table 4.3 at the link below or
  - CDC Vaccine Recommendations. ADCES.

1. 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025. Immunizations. ADA.

Goal Setting

Perhaps not at the first visit, but each of these should have a goal that is individualized to the participant

- A1C
- Blood glucose and time in range
- Lipids
- Blood pressure
- Weight management
- Physical activity
- Taking medications
- Healthy eating and food choices
- Other self-management goals

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By the end of the Diabetes Education Program, Participants should have a…

- Plan for how and when to check blood glucose and how to document the values
- Way to do meal planning that works for them
- Strategy to increase physical activity to work towards the recommendations
- Method to remember when and how to take medications
- Schedule for regular health check-ups (e.g., clinical and dental visits, tests, screenings)
- Way(s) to deal with stress

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Welcome and Overview for Participants Potential Approach

- Welcome to Living Well with Diabetes – a diabetes education training!
- Thank you for taking the time to attend this session.
- We will learn together…
  - You are the expert of you, and I will learn about you from you.
  - I will help fill in some things related to diabetes that you want or need to know.
  - Together we will develop ideas and plans to help you live well with diabetes.

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Living Well with Diabetes Education Program

Understanding the Diabetes - The Basics
Healthy Coping with Diabetes and Emotional Well-Being
Healthy Eating
Being Active
Taking Medication as Prescribed
Monitoring Blood Glucose Levels, Activity, and Eating Habits
Reducing Risks to Lower Chances of Diabetes Complications
Problem Solving to Find Solutions and Take Action

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Living Well with Diabetes Education
Table of Contents

PARTICIPANT

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PARTICIPANT

OUR SHARED DIABETES EDUCATION GOALS

- Learn and work together to help you make changes to take charge of your health
- Know what diabetes is, what causes it, and what you can do to stay healthy.
- Find ways to help you eat better in ways that work for you and how you live.
- Develop strategies to move your body that fit your life and help keep your blood sugar in a healthy range.
- Understand how and when to check your blood sugar, blood pressure, or weight - and what the numbers mean.
- Learn how your diabetes medicines work, how to take them safely, and what side effects to watch for.
- Get tools to handle common challenges like high or low blood sugar, sick days, or changes in routine.
- Learn how to prevent diabetes problems, like kidney, eye, heart, foot and other issues and when to get checkups.
- Explore ways to manage stress, emotions, and the ups and downs of life with diabetes.
- What else is an important goal for you?

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Understanding Diabetes The Basics

Diabetes is a complex and often challenging health issue that has a risk of complications if not managed effectively. The good news is that you can manage your diabetes with medications and lifestyle changes, like healthy eating and regular physical activity.

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PARTICIPANT

UNDERSTANDING DIABETES FOR STARTERS – IMPORTANT TO KNOW

- ✓**It's not your fault, and you can live a long, healthy life with diabetes!**
- ✓You're also not alone. About 10–11% of Americans (around 34–36 million people) live with type 2 diabetes.[1]
- ✓T2D can be prevented or delayed with lifestyle changes[1] → losing weight if you have overweight, eating a healthy diet, and getting regular physical activity. (Weight loss can lead to diabetes remission.)

Risk factors for T2D[1]

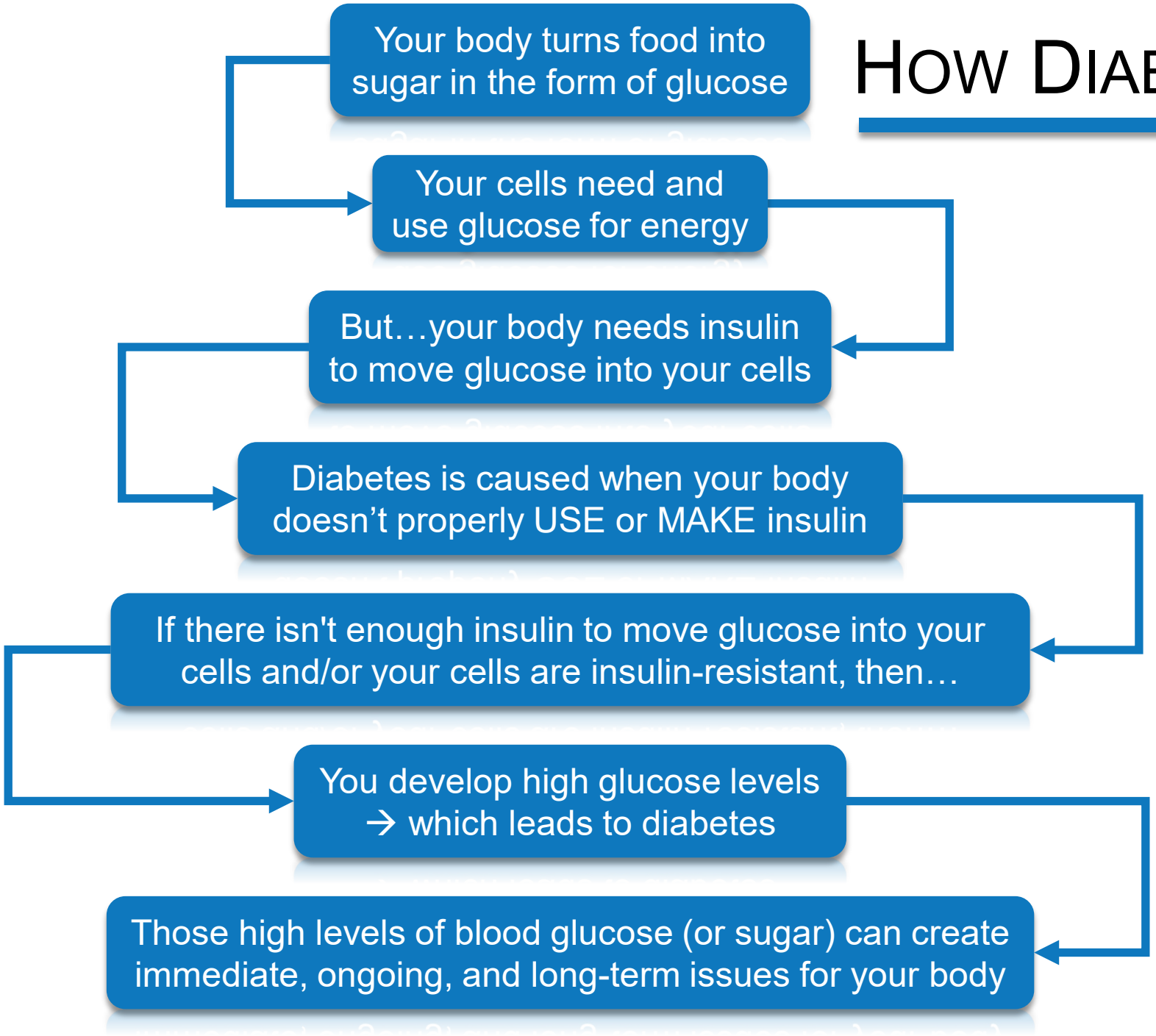
- *Being overweight*
- *Having a family history of T2D*
- *Being physically inactive*
- *Being 45 or older*

1. Type 2 Diabetes. CDC.

Understanding Diabetes Types and Terminology

- We only discuss type 2 diabetes (T2D) in nonpregnant adults in this program
- We can use blood glucose or blood sugar – whichever you prefer
- We don't use the term "insulin-dependent diabetes" or "juvenile-onset diabetes"; T2D can progress to needing insulin
- Diabetes is diagnosed in nonpregnant individuals by any of the following:
  - A1C ≥ 6.5%
  - Fasting plasma glucose ≥126 mg/dL
  - 2-h plasma glucose ≥200 mg/dL during oral glucose tolerance test
  - In an individual with classic symptoms of hyperglycemia or hyperglycemic crisis, a random plasma glucose ≥200 mg/dL. Random is any time of the day without regard to time since previous meal.

How Diabetes "Happens"



This is a very simplified explanation of what's going on in your body that leads to diabetes and possible complications if blood glucose is not controlled with lifestyle changes and/or medications.

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Types of Diabetes

Type of Diabetes	What Happens	Treatment
Type 1 Diabetes	Immune system attacks the pancreas → no insulin made	 Daily insulin for life
Type 2 Diabetes	Body doesn't use insulin well and may stop making enough	 Healthy habits, pills, and sometimes insulin
Gestational Diabetes	Diabetes that starts during pregnancy Pregnant women (usually in 2nd or 3rd trimester)	 Often goes away after birth, but needs close care
Prediabetes	Blood sugar is higher than normal, but not high enough for diabetes	Lifestyle changes to prevent type 2 diabetes

Types of Diabetes - Summary

- There are three types of diabetes – type 1, type 2 (T2D), gestational.
- Prediabetes is not technically diabetes, but it's getting close to T2D.
- "In the United States, **about 1 in 3 adults has prediabetes**, and more than 8 in 10 of them don't know they have it. Without taking action, **many people with prediabetes could develop type 2 diabetes within 5 years**."[1]

1. About Prediabetes and Type 2 Diabetes. CDC.

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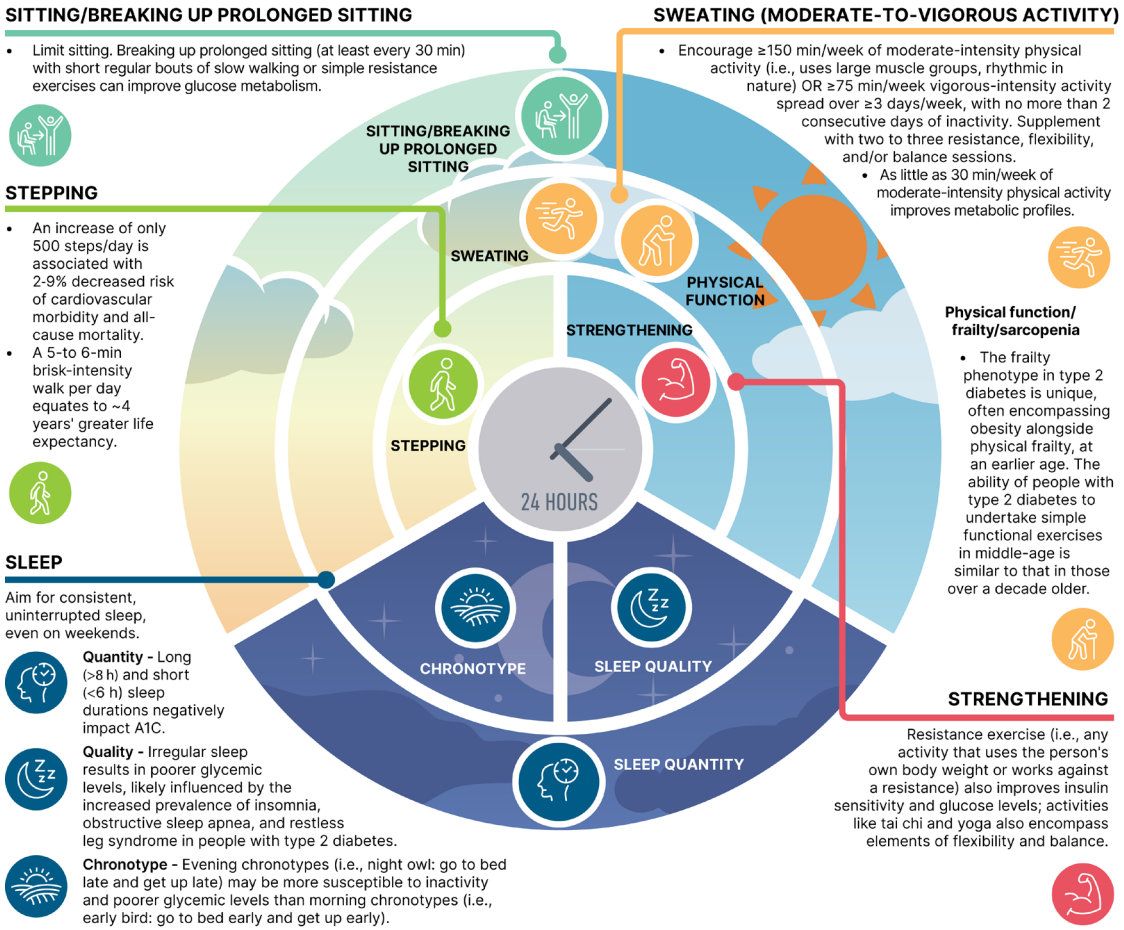
EDUCATOR

American Diabetes Association®

Importance of 24-Hour Physical Behaviors for Type 2 Diabetes



	Glucose/ insulin	Blood pressure	A1C	Lipids	Physical function	Depression	Quality of life
SITTING/BREAKING UP PROLONGED SITTING	↓	↓	↓	↓	↑	↓	↑
STEPPING	↓	↓	↓	↓	↑	↓	↑
SWEATING (MODERATE-TO-VIGOROUS ACTIVITY)	↓	↓	↓	↓	↑	↓	↑
STRENGTHENING	↓	↓	↓	↓	↑	↓	↑
ADEQUATE SLEEP DURATION	↓	↓	↓	↓	?	↓	↑
GOOD SLEEP QUALITY	↓	↓	↓	↓	?	↓	↑
CHRONOTYPE/CONSISTENT TIMING	↓	?	↓	?	?	↓	?

IMPACT OF PHYSICAL BEHAVIORS ON CARDIOMETABOLIC HEALTH IN PEOPLE WITH TYPE 2 DIABETES

↑ Higher levels of improvement (physical function, quality of life) ↓ Lower levels of improvement (glucose/insulin, blood pressure, A1C, lipids, depression)
? No data available
↑ Green arrows = strong evidence ↑ Yellow arrows = medium-strength evidence ↑ Red arrows = limited evidence

From: 5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes - 2025. Diabetes Care. 2024;48(Supplement_1):S86-S127.

This is a busy yet comprehensive graphic from the ADA's 2025 Standards of Care. The font is small, perhaps too small for a set of PowerPoint slides, but it is a great graphic that can be used by the educator or even printed as a handout for talking points.

Figure Legend: Importance of 24-h physical behaviors for type 2 diabetes. Adapted from Davies et al..

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Healthy Eating

- Understanding how food affects blood glucose
- Choosing nutritious foods in amounts that lead to health and wellness.
- Learning how to make healthy, enjoyable food choices.

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Healthy Eating
Key Points from the ADA

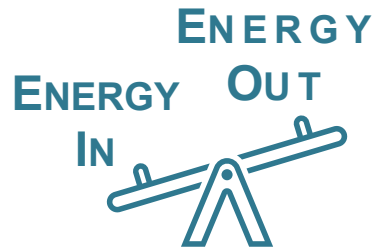
- **"Simply put, people eat food, not nutrients, and nutrition recommendations need to be applicable to what people actually eat."**[1]
- All members of the health care team should also be empowered to reiterate the general and evidence-based nutrition advice to **limit processed foods and foods high in added salt, sugars, and fats and, when possible, choose whole foods**.

1. 5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes – 2025. ADA. Table 5.1 – Nutrition Therapy Recommendations

HEALTHY EATING

ADA NUTRITION THERAPY RECOMMENDATIONS

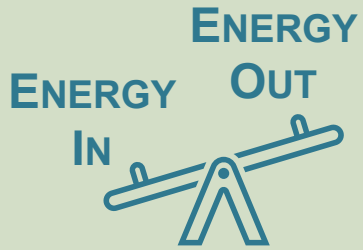
- Promote energy balance
- Encourage healthy, evidence-based eating patterns
- Do not promote the use of micronutrient, herbal, and other supplements to aid in glycemic management
- Avoid excess alcohol intake (or avoid altogether)
- Limit sodium and foods high in salt
- Recommend water over other beverages
- Screen for malnutrition



1. 5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes – 2025. ADA. Table 5.1 – Nutrition Therapy Recommendations
2. Note that Medical Nutrition Therapy (MNT) is a Medicare benefit but has specific criteria and must be delivered by a registered dietician nutritionist (RDN) or nutrition professionals who meet certain criteria around licensure/certification.

Healthy Eating

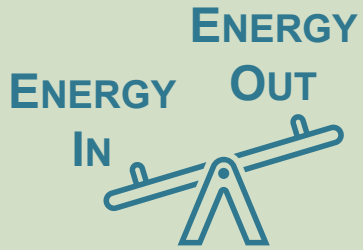
A few words about energy balance



- A pound of fat is 3,500 calories. By decreasing calories by about 100 per day for 365 days (a year), you can lose (or gain!) 10 pounds per year!
- It can be hard to reduce calories without feeling hungry.
- Exercise is amazing people with diabetes, but it is better for maintaining weight than for losing weight.
- Remember – if you are overweight or obese, weight loss may be an effective strategy to put diabetes into remission.
- There are three ways to decrease energy intake – see next slide.

Healthy Eating

Decreasing Energy Intake



1 Caloric Restriction (CR)

- *Simply **eating less** - reducing total daily calorie intake while maintaining nutrient quality.*
- **How it's done**: Eating smaller portions, fewer meals, or reducing high-calorie foods.
- **Challenge**: Often unsustainable long-term due to hunger, energy dips, and social/environmental cues.

2 Time-Restricted Eating (TRE) or Intermittent Fasting

- ***Limiting the eating window**, such as eating only within 8 hours per day.*
- **Effect**: Naturally reduces calorie intake by reducing opportunities to eat.
- **Caution**: Works best when paired with nutrient-dense, non-processed foods - can backfire if bingeing occurs.

3 Dietary Restriction (DR)

- ***Restricting specific macronutrients** - most commonly carbohydrates (especially refined/processed ones).*
- **Examples**: Low-carb, ketogenic, or low-fat diets.
- **Challenge:** Can be hard to maintain long-term
- **Goal**: Indirectly reduce total calories by limiting intake of calorie-dense or hyperpalatable foods.

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HEALTHY EATING
ADA – PROMOTE ENERGY BALANCE

- Provide weight management treatment based on nutrition, physical activity, and behavioral therapy for all **people with overweight (BMI 25.0-29.9) or obesity (BMI ≥ 30.0)**, aiming for at least 3-7% weight loss.
  - Before discussing weight loss for people with overweight or obesity, consider asking permission first to give the participant control and to show respect.
  - "Would it be okay if we talked about how your weight might be affecting your blood sugar and overall health?"
  - Emphasize the benefits (not appearance) – can lower your A1C and blood pressure, improve your cholesterol profile, increase your energy…
  - "Even a small amount of weight loss (3% to 7%) - can make a big difference in managing blood sugar and reducing the risk of complications." Be prepared to let the participant know how many pounds the loss of 3%-7% is for them! [0.03 times weight and 0.07 times weight]

Example: If starting weight = 187.0 lbs then 3%-7% weight loss is 5.6 – 13.0 lbs → multiply the weight by 0.03 and then by 0.07 to get the range.

HEALTHY EATING

ADA – ENCOURAGE HEALTHY, EVIDENCE-BASED EATING PATTERNS.

- Recommend individualized meal plans that keep nutrient quality, total calories, and metabolic goals in mind
- Emphasize key nutrition principles (inclusion of nonstarchy vegetables, whole fruits, legumes, lean proteins, whole grains, nuts and seeds, and low-fat dairy or nondairy alternatives)
- Minimize consumption of red meat, sugar-sweetened beverages, sweets, refined grains, processed and ultraprocessed foods
- Consider reducing overall carbohydrate intake for adults with diabetes to improve glycemia, as this approach may be applied to a variety of eating patterns that meet individual needs and preferences.

HEALTHY EATING

PER ADA – DO NOT PROMOTE THE USE OF MICRONUTRIENT, HERBAL, AND OTHER SUPPLEMENTS TO AID IN GLYCEMIC MANAGEMENT

- Inquire about intake of dietary supplements and counsel as necessary.
- Supplementation with micronutrients (e.g., vitamins and minerals, such as magnesium or chromium)or herbs or spices (e.g., cinnamon and aloe vera) for glycemic benefits is not recommended.
- Counsel against β-carotene supplementation, as there is evidence of harm for certain individuals, and it confers no benefit.

HEALTHY EATING

ADA – AVOID EXCESS ALCOHOL INTAKE

- Advise adults with diabetes and those at risk for diabetes who consume alcohol to **not exceed the recommended daily limits**.
- Advise abstainers to not start drinking alcohol, even in moderation.
- Educate people with diabetes about the signs, symptoms, and self-management of delayed hypoglycemia after drinking alcohol, especially when using insulin or insulin secretagogues.
  - Seek guidance from the referring provider before providing this education.
- The importance of monitoring glucose after drinking alcoholic beverages to reduce hypoglycemia risk should be emphasized

HEALTHY EATING

ALCOHOL – MODERATION LIMITS

- Moderation of alcohol intake…
- Women → no more than one drink per day
- Men → no more than two drinks per day
- A drink =
  - 12 fluid ounces of regular beer (5% alcohol)
  - 5 fluid ounces of wine (12% alcohol), or
  - 1.5 fluid ounces of 80 proof distilled spirits (40% alcohol)

"There is no form of alcohol consumption that is risk-free. Even low levels of alcohol consumption carry some risks and can cause harm." Alcohol. World Health Organization.

U.S. Department of Agriculture and U.S. Department of Health and Human Services. Dietary Guidelines for Americans, 2020–2025. United States Department of Agriculture.

HEALTHY EATING

ADA – LIMIT SODIUM AND FOODS HIGH IN SALT

- Salt is also called sodium chloride.
- Nutrition labels often list sodium rather than salt.
- The American Heart Association (AHA) recommends **no more** than 2,300 milligrams (mg) of sodium a day and moving toward an **ideal limit of no more than 1,500 mg** per day for most adults. Even cutting back by 1,000 mg a day can help improve your blood pressure and heart health.
- Foods high in sodium – fast food, canned soups, cold cuts & cured meats, pizza, cheese, frozen meals

🍔 **Big Mac – Nutritional Facts**

Nutrient	
Calories	590 kcal
Total Fat	34 g
- Saturated Fat	11 g
- Trans Fat	1.5 g
Cholesterol	75 mg
Sodium	1,010 mg
Total Carbohydrates	45 g
- Dietary Fiber	3 g
- Sugars	9 g
Protein	25 g

How Much Sodium Should I Eat Per Day?. AHA. Participant resource that includes a sodium tracker.

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HEALTHY EATING
TOP HIGH-SODIUM FOODS

Category	Examples	Why High?
Processed meats	Bacon, ham, hot dogs, sausage, deli turkey	Sodium used as preservative and flavor
Canned soups & broths	Chicken noodle, tomato, beef broth	Often contains >800 mg sodium/serving
Cheese (especially processed)	American, cheddar, string cheese	Naturally salty + added salt
Packaged snacks	Potato chips, pretzels, cheese crackers	Salt for flavor and shelf stability
Breads & rolls	Sandwich bread, bagels, dinner rolls	Hidden source due to frequency eaten
Pizza	Frozen or restaurant-style	Salt in crust, cheese, sauce, toppings
Fast food	Burgers, fries, fried chicken	High salt content in seasoning & prep
Frozen meals	TV dinners, frozen lasagna, mac & cheese	Preserved with high sodium
Condiments & sauces	Soy sauce, ketchup, BBQ sauce, salad dressing	Often >200–900 mg per tablespoon
Pickled foods & olives	Pickles, sauerkraut, canned olives	Brined in salty solution

HEALTHY EATING

ADA – WATER OVER OTHER BEVERAGES

- Recommend water over other beverages, including those that are nutritive and nonnutritive sweetened beverages.
- Nonnutritive sweeteners can be used instead of sugar-sweetened products if consumed in moderation and for the short term to reduce overall calorie and carbohydrate intake.

Consider…
Don't drink your food/calories!
Check food labels for beverages for Total Calories, Total Carbohydrates, Total Sugars & Total Added Sugars.

Brand name examples of nonnutritive sweeteners:

- Splenda®
- Stevia®
- Truvia®
- Pure Via®,
- Sweet One®
- Sweet'N Low®
- Equal®
- NutraSweet®

Alternatives without sugar or nonnutritive sweeteners include sparkling water or adding citrus or other whole fruit to plain water

HEALTHY EATING

- Plan your meals → identify when, what and how much you eat for the nutrition you need while keeping your blood glucose in your target range.
- Find a meal plan that fits with your goals, tastes and lifestyle and medications.
- Set realistic goals - eat more veges and fruits
- Learn about portion sizes and serving sizes
- Understand how to read food labels
- Time your meals with medicines, if indicated
- Understand the impact of carbs on your blood sugar.
- Aim to make small changes

HEALTHY EATING
ADA – OVERARCHING STANDARDS

- "Eating patterns should emphasize key nutrition principles (inclusion of nonstarchy vegetables, whole fruits, legumes, lean proteins, whole grains, nuts and seeds, and low-fat dairy or nondairy alternatives) and minimize consumption of red meat, sugar-sweetened beverages, sweets, refined grains, processed and ultraprocessed foods in people with prediabetes and diabetes."
- "Consider reducing overall carbohydrate intake for adults with diabetes to improve glycemia, as this approach may be applied to a variety of eating patterns that meet individual needs and preferences."

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HEALTHY EATING

- Refer to Table 5.2 – Macronutrient-specific nutrition recommendations for the ADA's recommendations for carbohydrates, proteins, and fats.
- However, the ADA notes that they are moving away from emphasizing macronutrients – carbs, proteins and fats – and are more broadly encouraging people to think in terms of eating patterns or the totality of the foods and beverages a person consumes.
- They stress promoting nutrient-dense food choices, defined as foods high in micronutrients while being relatively low in calories (e.g., vegetables, fruits, and legumes), using meal plans if possible
- We now focus on FOODS!

These broad guidelines are aligned with numerous other organizations including the American Heart Association.

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Table 5.3—Nutrition behaviors to encourage

- Vegetables—especially nonstarchy vegetables that are dark green, red, and orange in color; fresh, frozen, or low-sodium canned are all acceptable vegetable options.
- Legumes—dried beans, peas, and lentils.
- Fruits—especially whole fruit—fresh, frozen, or canned in own juice (or no added sugar) are all acceptable fruit options.
- Whole-grain foods—where culturally appropriate, whole-grain versions of commonly consumed foods such as 100% whole-wheat breads or pastas, and brown rice. When not culturally appropriate, focus more on portion control.
- Foods with at least 3 g of fiber per serving, which generally indicates a food higher in fiber.
- Water should be the primary beverage of choice.
- For individuals who do not prefer plain water, no-calorie alternatives are the next best choice. Options include adding lemon, lime, or cucumber slices to water; sparkling no-calorie water or flavored no-calorie waters; no-calorie carbonated beverages, etc.
- Plant-based proteins can include legumes (e.g., soybeans, pinto beans, black beans, garbanzo beans, dried peas, and lentils), nuts, and seeds.
- Meats and poultry should be from fresh, frozen, or low-sodium canned and in lean forms (e.g., chicken breast and ground turkey).
- Heart-healthy wild-caught fatty fish such as salmon, tuna, sardines, and mackerel. Fresh, frozen, or low-sodium canned are all acceptable options.
- Use herbs (e.g., basil, fennel, mint, parsley, rosemary, and thyme) and spices (e.g., cinnamon, garam masala, ginger, pepper, and turmeric) to season foods instead of salt or salt-containing preparations.
- Incorporate onions, garlic, celery, carrots, and other vegetables as a base for preparing various homemade foods.
- Cook with vegetable oil (e.g., canola and olive) in place of fats high in saturated fat (e.g., butter, shortening, lard, and coconut oil).
- Meal prep by planning out meals for the week, grocery shopping with a list, and cooking on a day off so there are ready-to-eat and ready-to-reheat homemade meals waiting in the fridge or freezer.
- Include family or roommates in meal preparation; share the responsibilities of grocery shopping and cooking.

Facilitating Positive Heath Behaviors and Well-being to Improve Health Outcomes: *Standards of Care in Diabetes - 2025. Diabetes Care* 2025;48(Suppl. 1):S86-S127

Healthy Eating
What about Glycemic Index?

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- The glycemic index ranks carbohydrate foods on their postprandial (after a meal) glycemic response (rise in blood glucose levels).
- There are varying definitions of low- and high-glycemic index foods.
- If you have a high-fiber eating pattern, you will also be eating foods that have “low glycemic index”
- The ADA notes that the literature around glycemic index is complex, and they do not have specific recommendations for incorporating it into diabetes education.

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

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HEALTHY EATING
WHAT ABOUT CARB COUNTING?

In the 2025 Standards of Care, the ADA reviews the current literature around carbohydrate (carb) counting.

They note that compared to the diabetes plate method, carb counting is a more advanced skill, and they do not specifically recommend it as an approach for adults with T2D that are not on insulin.

The ADA notes that "Regardless of the amount of carbohydrate in the meal plan, focus should be placed on high-quality, minimally processed, nutrient-dense carbohydrate sources high in fiber."[1]

1. "…people with diabetes should consume at least the amount of fiber recommended by the DGA 2015–2020 (minimum of 14 g of fiber per 1,000 kcal) with at least half of grain consumption being whole intact grains. Other sources of dietary fiber include nonstarchy vegetables, avocados, fruits, and berries, as well as pulses such as beans, peas, and lentils." Evert, A, Dennison, M, Gardner, C, et al; Nutrition Therapy for Adults With Diabetes or Prediabetes: A Consensus Report. *Diabetes Care* 1 May 2019; 42 (5): 731–754.

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HEALTHY EATING PROTEIN

- Compared to carbohydrates and fats, protein is better at making us feel full or satisfied, especially when included in meals with fiber.
- “People with diabetes and those at risk for diabetes are advised to incorporate more plant-based protein sources (e.g., nuts, seeds, and legumes) as part of an overall diverse eating pattern to reduce cardiovascular disease risk.”

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

HEALTHY EATING
ADA - GENERAL PROTEIN INTAKE RECOMMENDATIONS

- No evidence that adjusting the daily protein intake above or below the recommended amount for the general public[1] will improve health.
- Research is inconclusive regarding the ideal amount of dietary protein to optimize either glycemic management or CVD risk.
- Protein intake goals should be individualized based on current eating patterns.

- The recommended daily allowance (RDA) of 0.8 g/kg/day is only for **minimum survival**, not optimal function.
- **Higher protein intake supports muscle preservation**, especially during caloric restriction or aging.

Recommended protein intake 0.8-1.5 g/kg body weight/day or 15-20% of total calories

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

HEALTHY EATING
EXAMPLE - PROTEIN SOURCES

- Aim for 20-30 g per meal
- Include protein with each meal and snack
- Helps reduce blood sugar spikes
- Adjust if you have kidney disease (talk to your provider)

Food	Protein (approx.)
1 large egg	6 g
3 oz chicken or turkey	21 g
3 oz fish	20 g
½ cup beans or lentils	7–9 g
1 cup Greek yogurt (plain)	15–20 g
1 oz nuts or seeds	4–7 g
1 oz cheese	6–7 g
1 scoop protein powder	20–25 g

Healthy Eating Fats

- Limit foods high in saturated fat (e.g., red meat, full-fat dairy, butter, and coconut oil) to help reduce cardiovascular disease risk[1].
- The National Academy of Medicine has defined an acceptable macronutrient distribution for total fat for all adults to be 20–35% of total calorie intake.[2]

1. 5. Facilitating Positive Health Behaviors and Well-being to Improve Health Outcomes: Standards of Care in Diabetes—2025. ADA.
2. Dietary Reference Intakes for Energy, Carbohydrate, Fiber, Fat, Fatty Acids, Cholesterol, Protein, and Amino Acids. Institute of Medicine. Washington, DC, National Academies Press, 2005

Healthy Eating Meal Planning

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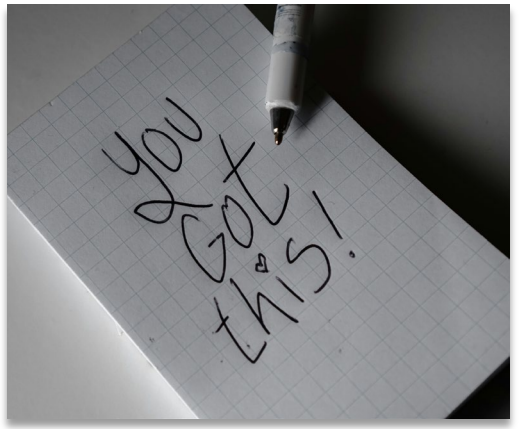
- Meal planning is a great strategy, but it is challenging do, which shouldn't stop you!
  - Find a way that works for each participant (paper, digital, app?)
  - Accommodate each person's unique circumstances and preferences
  - Overcome numerous barriers (affordability, access to healthy options, etc.)
  - Find the time and acquire the skills of food prep (sometimes)
  - Adapt to family, shared meals, eating on the go, etc.
  - Muster enough energy to cook and prepare in advance
  - Build and sustain the habit
  - Ensure that it's not overwhelming
  - And more…



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Diabetes Plate Method

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American Diabetes Association.
Connected for Life

Nutrition for Life: Diabetes Plate Method

The Diabetes Plate Method is a helpful tool for anyone who wants to eat better and learn about variety and portion sizes, including people with prediabetes. Each section of the plate (based on a nine-inch plate) is for the following three food groups: vegetables, grains, and protein. Off to the side is dairy and fruit. These five food groups are the foundation for healthy eating.

Fill 1/2 of the plate with non-starchy vegetables.

- Non starchy vegetables are low in carbohydrates. One serving amounts to one cup raw veggies, such as a salad greens or ½ cup cooked, such as broccoli. You can have as many non-starchy vegetables as you like, but make sure at least half of your plate is filled with things like green salad, broccoli, or asparagus.

Fill 1/4 of the plate with grains, starchy vegetables, or beans and lentils.

- Choose whole grains such as brown rice or quinoa which are rich in vitamins, minerals, and fiber. Beans and lentils contain both starch and protein with good amounts of fiber.

Fill 1/4 of the plate with Protein

- This section includes meat and other protein sources, such as eggs and fish. Look for lean cuts of meat and low-fat cheeses. 1/4 of the plate is equivalent to a 3 oz cooked portion (about the size of a deck of cards or the palm of your hand).

Continued >>

- Use the plate method:
  - ½ non-starchy veggies
  - ¼ lean protein
  - ¼ whole grains or starchy food

- Diabetes plate method – download and print this two-page patient infographic, if possible (version in Spanish here).

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HEALTHY EATING
MINIMIZE EATING ULTRA-PROCESSED FOODS

- Ultraprocessed foods (UPF) can be “mind-bendingly delicious”.
- UPF are energy dense and high in added carbs, mostly sugars and fats, mostly oils – making them easy to overeat, low in protein and fiber and therefore, less filling.
- Because they activate our brain’s reward system, they can be addictive.
- More than half of the calories consumed in high-income countries like the U.S. come from UPF[1].

1. Martínez Steele E, Baraldi LG, Louzada ML, et al. Ultra-processed foods and added sugars in the US diet: evidence from a nationally representative cross-sectional study. BMJ Open. 2016 Mar 9;6(3). “Ultra-processed foods comprised 57.9% of energy intake, and contributed 89.7% of the energy intake from added sugars. The content of added sugars in ultra-processed foods (21.1% of calories) was eightfold higher than in processed foods (2.4%) and fivefold higher than in unprocessed or minimally processed foods and processed culinary ingredients grouped together (3.7%). ”

Healthy Eating
Minimize Eating Ultra-processed Foods

- It might be ultra-processed food if you:
  - See a long list of ingredients with most of them being things you have never heard of and/or cannot pronounce easily
  - Bought it at a gas station or convenience store.
  - See that the serving size is small, but the calories and total sugar are high for the serving size.
  - What else is a clue that it might be ultra-processed?

HEALTHY EATING
PROCESSED & ULTRA-PROCESSED FOODS

Groups	Description	Examples
1 Unprocessed or Minimally Processed Foods	Unprocessed foods are the edible parts of plants, animals, algae , and fungi along with water. Natural foods altered by removal of inedible parts, drying, grinding, chilling, etc., but with no added substances, like salt, sugar, oils or fats	Milk, meat, eggs, fish, poultry, plain unsweetened yogurt, beans, fresh, frozen, or dried fruits and vegetables, oats, grits, pasta, rice.
2 Processed Culinary Ingredients	Food products from Group 1 that have been processed by pressing, refining, grinding and/or milling; they are used in home and restaurant kitchens to prepare, season and cook Group 1 foods. These foods usually do not include additives.	Vegetable oils, butter, vinegar, salt, sugar and molasses from cane or beet, honey extracted from combs and syrup from maple trees.
3 Processed Foods	Food products made by adding sugar, oil and/or salt to create simple products from Group 1 foods with increased shelf life or enhanced taste.	Canned vegetables with salt, cheese, breads, salted nuts
4 Ultra-Processed Foods (UPFs)	Industrially created food products created with the addition of multiple ingredients that may include some Group 2 ingredients as well as additives to enhance the taste and/or convenience of the product, such as hydrolyzed proteins, soy protein isolate, maltodextrin, high fructose corn syrup, stabilizers, flavor enhancers, non-sugar sweeteners, and processing aids such as stabilizers and bulking and anti-bulking agents.	Commercially produced breads, rolls, cakes, cookies, donuts, breakfast cereals, soy burgers, flavored yogurts, ready-to-heat meals, such as frozen pizzas, soft drinks, and candy.

Healthy Eating
Reading Food Labels

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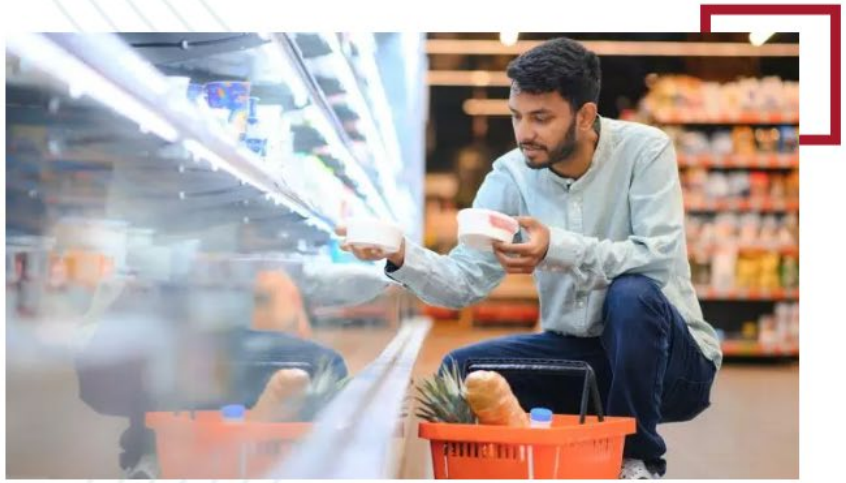
OR

- Rather than recreating the great content put together by the ADA, check out this resource: Reading Food Labels



Put food labels to work

The Nutrition Facts labels on foods are really the key to making the best choices. We'll cover the basics so that these labels make shopping easier for you.

Screenshot from ADA website.

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ADA NUTRITION HANDOUTS & YOUTUBE VIDEOS - ENGLISH OR SPANISH

- Food Groups and Portion Sizes (Handout and Video)
- Health Ways to Cook and Season Food (Handout and Video)
- Navigating the Grocery Store (Handout and Video)
- Food Label Know How (Handout and Video)
- Plan Your Plate (Handout and Video)
- Sugar Substitutes (Handout and Video)

ADA Nutrition Handouts and YouTube Videos. ADA.

ADA NUTRITION HANDOUTS & YOUTUBE VIDEOS - ENGLISH OR SPANISH

- Diabetes Meal Planning - Discover helpful tools such as the plate method and carb counting and learn about portion sizes.
- Eating Well with Diabetes. CDC. There are links to over 16 related topics in English and Spanish

Being Active

- Understanding the benefits of regular physical activity.
- Identifying safe and realistic ways to increase physical activity to help manage blood sugar, weight, and overall health.
- Setting personalized, achievable goals to increase physical activity

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BEING ACTIVE
EDUCATOR GUIDANCE

- Changing habits to make lifestyle changes is hard, and beginning to exercise or incorporate more physical activity is no different.
- The most important point is to do something everyday so that it becomes part of the participant's routine and daily habits.
- Everyone can do something – even if it's marching in place for 15 minutes every evening while watching shows.
- Help your participant set personalized, realistic goals.

The 4 Laws of Behavior Change
James Clear's Habit Framework

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Step	Law	How to Apply It
1. **Cue**	**Make it obvious**	Design your environment to remind you of the habit (visual triggers)
2. **Craving**	**Make it attractive**	Pair the habit with something enjoyable (temptation bundling)
3. **Response**	**Make it easy**	Reduce friction - start small and use the 2-minute rule
4. **Reward**	**Make it satisfying**	Use positive reinforcement; track progress; celebrate success

Two Minute Rule: "When you start a new habit, it should take **less than two minutes to do**." The goal is to **make the habit so easy to start** that you can't say no. It lowers the barrier to entry and helps you build consistency.

Clear, J. (2018). *Atomic habits: An easy & proven way to build good habits & break bad ones*. Avery.

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BEING ACTIVE
EXAMPLE OF BUILDING A WALKING HABIT

- **Cue:** Leave your walking shoes by the door (make it obvious)
- **Craving:** Listen to your favorite podcast while walking (make it attractive)
- **Response:** Start with just 5 minutes (make it easy)
- **Reward:** Mark it on a calendar or app (make it satisfying)

"Every action you take is a vote for the person you wish to become."
~ James Clear

BEING ACTIVE
EXERCISE OR PHYSICAL ACTIVITY?

EXERCISE HAS BEEN SHOWN TO

- Significantly improve insulin sensitivity
- Improve blood glucose levels
- Reduce cardiovascular risk factors
- Contribute to weight loss and maintenance
- Improve well-being

"Exercise is a more specific form of physical activity that is structured and designed to improve physical fitness. Both physical activity and exercise are important."

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

BEING ACTIVE
ADA PHYSICAL ACTIVITY RECOMMENDATIONS

- Evaluate baseline physical activity and time spent in sedentary behavior (i.e., sitting, lying, and leaning).
- For people who do not meet activity guidelines, encourage an increase in physical activities (e.g., walking, yoga, housework, gardening, swimming, and dancing) above baseline.

ANY physical activity is better than NO activity!

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

Being Active
ADA Physical Activity Recommendations

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- Engage in at least 150 minutes/week of moderate- or vigorous-intensity aerobic activity - no more than 2 consecutive days without activity.
  - ❖Shorter durations (minimum 75 min/week) of vigorous-intensity or interval training may be sufficient for more physically fit individuals.
- Limit the amount of time being spent sedentary, including recreational screen time.
  - ❖Prolonged sitting should be interrupted at least every 30 min for blood glucose benefits.
- Recommend flexibility training and balance training 2–3 times/week for older adults

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

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BEING ACTIVE
ADA RESISTANCE EXERCISE RECOMMENDATIONS

- **Engage in 2–3 sessions/week of resistance exercise** (free weights, machines, elastic bands, or body weight as resistance), **on nonconsecutive days**, with each session consisting of at least one set (group of consecutive repetitive exercise motions) of five or more different resistance exercises involving the large muscle groups.

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

Being Active
Setting Goals - Example

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- **Set SMART goals for increasing exercise/physical activity.**

❖**S**pecific – *I will walk at a brisk pace (for me)*

❖**M**easurable – *for 30 minutes (on weekdays)*

❖**A**ctionable – *along the street by my house with my dog when I get home from work*

❖**R**easonable – *at least five days a week (weekdays)*

❖**T**imebound – *for the next 30 days.* After that I will decide if this works for me or if I want to change my physical activity goals.

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

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Taking Medications as Prescribed

- Reviewing common types of diabetes medications.
- Identifying and addressing barriers to obtaining and taking medications as prescribed.
- Listing medications for the participant, for shared care partners, and for advanced planning for emergencies.

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Taking Medications
Common Types of Medications (Pills)

Type	What It Does	Example Names
Metformin	Lowers sugar made by the liver and helps the body use insulin better	Metformin, Glucophage
Sulfonylureas	Helps the pancreas make more insulin	Glipizide, Glyburide, Glimepiride
Meglitinides	Helps the body make quick insulin after meals	Repaglinide, Nateglinide
DPP-4 Inhibitors	Helps the body make more insulin and less sugar after meals	Sitagliptin (Januvia), Linagliptin (Tradjenta)
SGLT2 Inhibitors	Helps the body get rid of sugar in the urine	Empagliflozin (Jardiance), Dapagliflozin (Farxiga)
TZDs (Thiazolidinediones)	Helps the body use insulin better	Pioglitazone (Actos)
Alpha-glucosidase Inhibitors	Slows the digestion of carbs to reduce sugar spikes	Acarbose (Precose), Miglitol (Glyset)

Taking Medications
Common Types of Medications

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Injected Insulins		
Type	**When It Works**	**Example Names**
Long-acting (basal)	Works slowly all day and night	Lantus, Basaglar, Tresiba
Short-acting (mealtime)	Works quickly to lower sugar after meals	Humalog, Novolog
Premixed insulin	Mix of short and long-acting insulin	Humalog Mix 75/25, Novolog Mix 70/30

Taking Medications
Common Types of Medications

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Non-Insulin Injections		
Type	**What It Does**	**Example Names**
GLP-1 Receptor Agonists	Slows digestion, lowers sugar after meals, helps with weight	Ozempic, Trulicity, Victoza
Amylin Analog *(less common)*	Slows food leaving the stomach and lowers after-meal sugars	Symlin (Pramlintide)

Some medications combine two drugs in one pill or injection, such as:

- Metformin + sitagliptin
- Metformin + empagliflozin
- Insulin + GLP-1 (e.g., Soliqua, Xultophy)

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TAKING MEDICATIONS AS PRESCRIBED WHAT GETS IN THE WAY?

- Cost – the ADA notes that ”The cost of diabetes medications and devices is an ongoing barrier to achieving glycemic goals.”[1]
- Due to cost, many people (up to 17%[2]) taking insulin will skip doses, take less insulin and/or delay their dose to save money.

How easy or difficult is it for you to afford your medications?
Would you say it’s:

- Very easy – I never have trouble affording them
- Somewhat easy – I can usually afford them without much worry
- Neutral – It’s manageable, but sometimes tight
- Somewhat difficult – I sometimes struggle to afford them
- Very difficult – I often can’t afford all the medications I need
- Have you ever had to skip or delay taking your medications because of the cost?

1. 1. Improving Care and Promoting Health in Populations: Standards of Care in Diabetes - 2025. ADA.
2. Borden CG, Bakkila BF, et al. The Association Between Cost-Related Insulin Rationing and Health Care Utilization in U.S. Adults With Diabetes. Diabetes Care. 2025 Mar 1;48(3):400-404..

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Taking Medications as Prescribed What gets in the way?

- Ability to pick up medications from a pharmacy due to lack of transportation or numerous other reasons.
- System to take medications as directed.
  - Even taking one medication or multivitamin per day can be a challenge!
  - People with T2D may need help developing a system that works for them such as
    - A med box
    - Setting reminder alerts on their phone
    - Putting medications near something else they do (e.g., putting an evening dose of a statin (for cholesterol) by their toothbrush)

1. 1. Improving Care and Promoting Health in Populations: Standards of Care in Diabetes - 2025. ADA.
2. Borden CG, Bakkila BF, et al. The Association Between Cost-Related Insulin Rationing and Health Care Utilization in U.S. Adults With Diabetes. Diabetes Care. 2025 Mar 1;48(3):400-404..

Taking Medications as Prescribed Tips

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Use Daily Reminders
- ✓ Phone alarms or calendar alerts
- ✓ Smartphone apps (there are plenty)
- ✓ Sticky notes on the bathroom mirror or fridge

Link to Daily Routines (Habit Stacking)
- ✓ Take meds right after brushing teeth, eating breakfast, or feeding the dog
- ✓ Example: *"After I pour my coffee, I take my pill."*

Use a Pill Organizer
- ✓ Weekly or monthly pill boxes with AM/PM slots
- ✓ Visual cue + reduces missed doses or double dosing

Keep Medications Visible (When Safe)
- ✓ Place near toothbrush, coffee maker, or bedside table
- ✓ Make sure it's out of reach of children and pets

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Taking Medications as Prescribed Tips

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Set Up Automatic Refills
- ✓ Use your pharmacy's auto-refill and text reminder services
- ✓ Consider home delivery for convenience

When Traveling or Busy
- ✓ Pack meds in your carry-on
- ✓ Set backup reminders or bring extra doses in case of delay

Talk to Your Provider
- ✓ Ask about simplifying your regimen (e.g., fewer doses per day)
- ✓ Understand what each medication is for (improves motivation)

Involve Support People
- ✓ Ask a family member or caregiver to check in
- ✓ Use shared digital calendars or reminder apps

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Taking Medications as Prescribed
More Tips

- **ALWAYS have a list of all your medications with you – prescriptions, over-the-counter medications, vitamins, and supplements!**
- Can be a list on paper, on your phone, or easy, quick link to your patient portal. Include the name, dose, and when you take each one.
- Why have a list of your meds?
  - *Essential in case something happens to you, and you are transported by ambulance or admitted to the hospital!*
  - *Makes it easy when you see others involved in your care – just hand (or show) them the list! Bring the list to every healthcare appointment.*

Taking Medications as Prescribed More Tips

PARTICIPANT

- Take medications as directed.
- Don’t skip doses.
- Ask questions if your unsure about anything – side effects, what to do if you miss a dose, why you’re taking the medication, how best to request refills (e.g., call the office or call the pharmacy), etc.
- Know when to take your medications, which medications can be taken together, which can be taken with food.
- Fill prescriptions as soon as possible.
- Use the same pharmacy if possible so they can help oversee all your medications.
  - Your pharmacist can answer your questions about your medications, help find affordable options and send reminders for refills.

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Taking Medications as Prescribed
Things to Tell your Provider

- Any side effects
- If you've stopped taking any of your medications
- Any medications that you've been prescribed by other providers
- If your medicines are affecting your quality of life
- ANY OTHER QUESTIONS OR CONCERNS YOU HAVE!

Monitoring

- Checking blood glucose, blood pressure, cholesterol, and other indicators regularly.
- Keeping track of all the monitoring.

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MONITORING

ADA RECOMMENDATIONS – BLOOD GLUCOSE MONITORING (BGM)

- People with diabetes **should be provided with blood glucose monitoring (BGM) devices** as indicated by their circumstances, preferences, and treatment. People using CGM devices must also have access to BGM at all times.
- CGM is beneficial and recommended for individuals at high risk for hypoglycemia
- In general, no device used in diabetes management works optimally without **education, training, and ongoing support**.
- Although BGM in people on noninsulin therapies has not consistently shown clinically significant reductions in A1C levels, it **may be helpful when modifying meal plans, physical activity plans, and/or medications** (particularly medications that can cause hypoglycemia) in conjunction with a treatment adjustment program.
- **Consider combining technology** (CGM, insulin pump, and/or diabetes apps) **with online or virtual coaching to improve glycemic outcomes**.

7. Diabetes Technology: Standards of Care in Diabetes – 2025. ADA.

MONITORING

EXAMPLES OF FREE APPS (CONTENT FROM CHATGPT)

Apps for Type 2 Diabetes			
App	**Best For**	**Key Features**	**Cost**
mySugr	All-in-one daily tracking	Logs glucose, food, meds; A1C estimate; personalized feedback	Free; Pro version adds reports & insights
Glucose Buddy	Logging and insights	Glucose, meals, activity, meds; syncs with devices	Free; Premium available
One Drop	Data + coaching	Blood sugar, meds, activity + optional health coach	Free; Coaching via subscription
BlueStar Diabetes	T2D self-management	FDA-cleared app with real-time feedback and coaching	Often free via employer or insurer

Nutrition & Carb Tracking			
App	**Best For**	**Key Features**	**Cost**
Carb Manager	Low-carb diets	Tracks carbs, macros, glucose, weight	Free; Premium unlocks more tools
MyFitnessPal	General diet tracking	Massive food database, barcode scanner, calorie/macros	Free; Premium for deeper insights

Lifestyle & Support Tools			
App	**Best For**	**Key Features**	**Cost**
Bezzy T2D	Community support	Peer chat, articles, lived experience stories	Free
Headspace or Calm	Stress management	Guided meditation, sleep support, mindfulness	Free trial; Paid subscription
Apple Health / Google Fit	General health tracking	Steps, weight, glucose sync with other apps	Free

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MONITORING
BLOOD GLUCOSE LEVEL

- Blood glucose level
  - How much sugar (or glucose) is in your blood stream at that moment.
  - Helps you know how your medication, eating, and exercise are affecting your blood sugar.
  - There are two ways to monitor blood glucose – capillary (finger-stick) meter or continuous glucose monitoring (CGM)

Blood Glucose Target Ranges (for most nonpregnant people)

- Fasting (before meals): 80 to 130 mg/dL
- After meals (2 hours later): Below 180 mg/dL

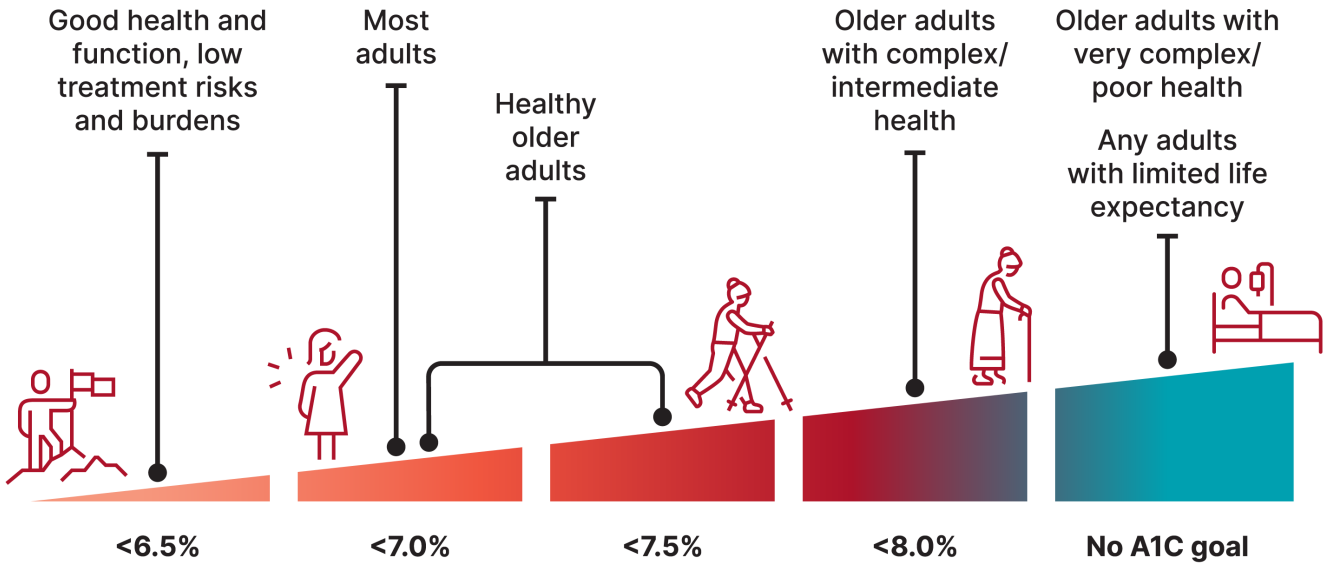
MONITORING HEMOGLOBIN A1C (A1C)

- Your A1C is an indicator of your average blood glucose over the past three months.
- A1Cs are provide as percentages.
- For most adults with T2D, have your A1C checked:
  - Every 6 months if your diabetes is controlled; your last A1C was ≤ 7.0% (or the target your provider and you have decided is best for you)
  - Every 3 months if your diabetes is not well controlled; your last A1C was > 7.0% (or the target your provider and you have decided is best for you) or you've had changes in your life that may affect control of your diabetes.

A1C Target for Most Adults with T2D

- ≤ 7.0%
- The A1C target may be different based on patient-factors determined by you and your provider.

MONITORING A1C GOAL ≥ 7% MAY BE APPROPRIATE



Modifying Factors

Favor more stringent goal	Favor less stringent goal
Short diabetes duration	Long diabetes duration
Low hypoglycemia risk	High hypoglycemia risk
Low treatment risks and burdens	High treatment risks and burdens
Pharmacotherapy with cardiovascular, kidney, weight, or other benefits	Pharmacotherapy without nonglycemic benefits
No cardiovascular complications	Established cardiovascular complications
Few or minor comorbidities	Severe, life-limiting comorbidities

6. Glycemic Goals and Hypoglycemia: Standards of Care in Diabetes – 2025. ADA. Figure 6.2

MONITORING
A1C AND ESTIMATED AVERAGE GLUCOSE

- Your A1C is an indicator of your average blood glucose over the past three months.

A1C	Estimated Average Glucose (mg/dL)
5 %	97 (76–120)
6 %	126 (100–152)
7 %	154 (123–185)
8 %	183 (147–217)
9 %	212 (170–249)
10 %	240 (193–282)
11 %	269 (217–314)
12 %	298 (240–347)

MONITORING
BLOOD PRESSURE

- Per the ADA, “Hypertension is defined as a systolic blood pressure ≥130 mmHg or a diastolic blood pressure ≥80 mmHg based on an average of two or more measurements obtained on two or more occasions.”
- “The on-treatment blood pressure goal is <130/80 mmHg, if it can be safely attained.”
- For those not at goal, the ADA recommends a Dietary Approaches to Stop Hypertension (DASH)-style eating pattern including reducing sodium and increasing potassium intake, moderation of alcohol intake, smoking cessation, and increased physical activity.

Blood Pressure Target Ranges

- Blood pressure targets for those with T2D and hypertension are usually < 130 for the bottom number (diastolic) and < 80 for the top number (systolic)
- Targets may be individualized based on several factors as per a provider.

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes – 2025. ADA.

Dietary Approaches to Stop Hypertension (DASH). National Heart, Lung, and Blood Institute. Numerous resources and participant handouts to learn about and implement a DASH diet.

MONITORING CHOLESTEROL

- Per the ADA, you should have your lipid profile checked one per year – more often if indicated.
- If you start a medication for your cholesterol, you may need a lipid profile 4-12 weeks after you start or change one of those medications.

Cholesterol Target Ranges

- Total cholesterol < 200
- Triglycerides < 150
- LDL (bad) cholesterol < 100
- HDL (good) cholesterol ≥ 40 for men & ≥ 50 for women

MONITORING & TRACKING THE MONITORING

- The educator and participant in this diabetes education program should find a solution that works to ensure that monitoring parameters and recommended care are:
  - Obtained according to recommended schedules.
  - Noted for the most recent value and whether that value is in or out of target.
  - Scheduled for the next recommended monitoring or a tickler or reminder is in place for the participant to obtain the recommended monitoring (or care).

Reducing Risk of Complications from Diabetes

- Knowing what the diabetes complications are
- Finding ways to build in lifestyle changes, habits, and recommended follow-up, care, and screening to lower risks
- Strategizing on how to minimize the risk of those complications

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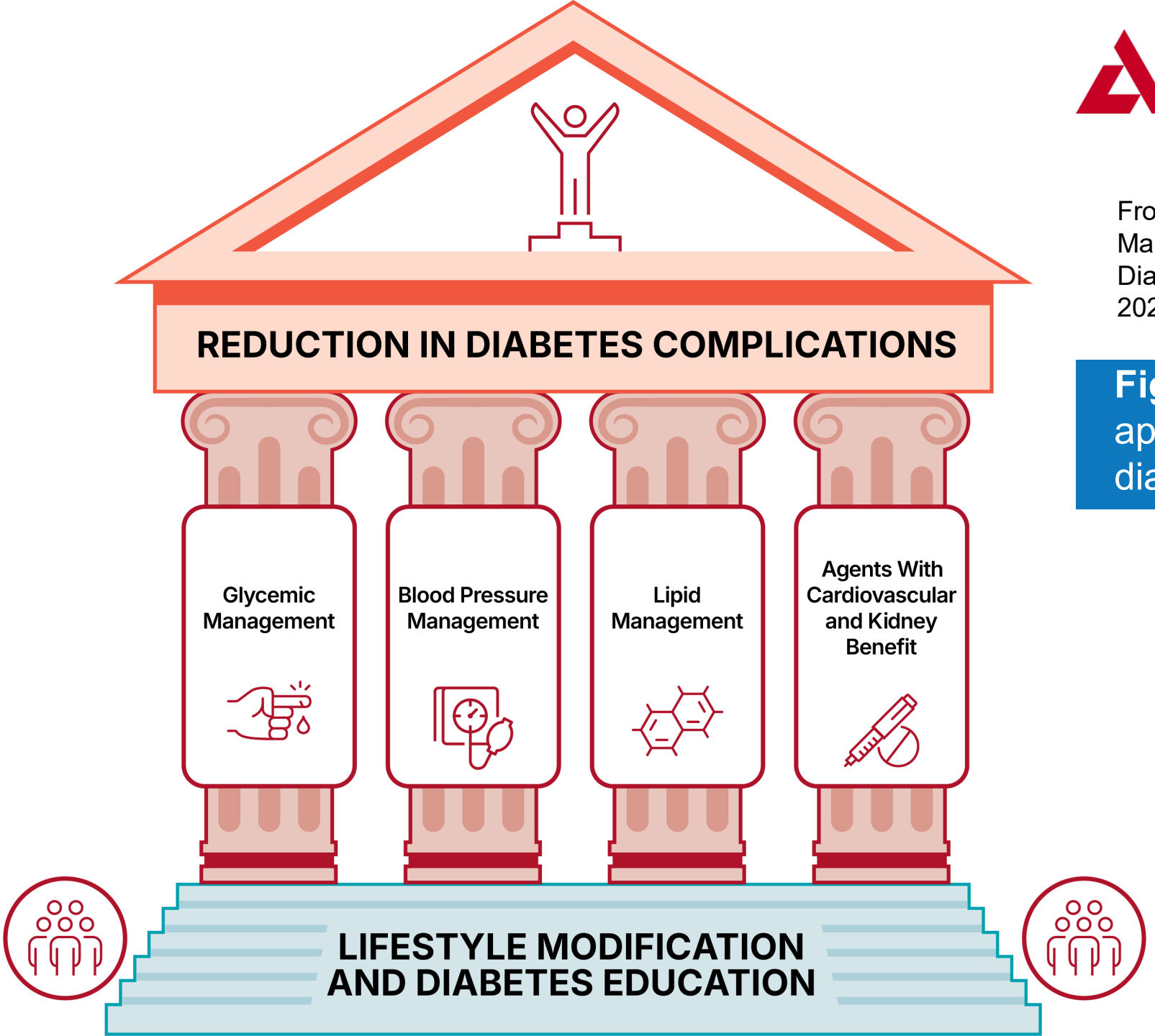

American Diabetes Association®

From: 10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes—2025. Diabetes Care. 2024;48(Supplement_1):S86-S127.

Figure Legend: Multifactorial approach to reduction in risk of diabetes complications.

PARTICIPANT

REDUCING RISK OF DIABETES COMPLICATIONS – THE BOTTOM LINE

- Your best defense to avoid or delay complications is to actively engage in optimizing control of your diabetes and well-being.
  - Control blood glucose, blood pressure, and cholesterol
  - Engage in physical activity on most days
  - Have healthy eating patterns – especially fruits, vegetables, and fiber
  - Manage weight
  - Take your medications as directed
  - Get high quality sleep
  - Reduce stress as much as possible
  - Keep up on recommended follow-up, screening, and testing
  - Quit smoking
  - Abstain from or reduce alcohol intake

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RISK OF ATHEROSCLEROTIC CARDIOVASCULAR DISEASE (ASCVD)

- Atherosclerotic cardiovascular disease (ASCVD) is the leading cause of illness and death in people with diabetes.
- It happens when blood vessels get narrowed or blocked due to a buildup of fat and cholesterol (called plaque), including:
  - Coronary artery disease – narrowed blood vessels in the heart
  - Myocardial infarction (MI or heart attack)
  - Stable or unstable angina (chest pain from poor circulation in the heart)
  - Peripheral artery disease (PAD) – narrowed blood vessels in the legs or arms
  - Aortic aneurysm - weak, bulging area in your largest artery
  - Transient ischemic attack (TIA) – mini-stroke from poor blood flow to the brain
  - Stroke

ADA RECOMMENDATIONS CARDIOVASCULAR DISEASE

- In people with no symptoms, routine screening for coronary artery disease is not recommended, as it does not improve outcomes as long as risk factors are treated.
- Effective management of hypertension, cholesterol, blood glucose, and weight can prevent or slow atherosclerotic cardiovascular disease (ASCVD).
- Consider intensive lifestyle interventions focused on weight loss through decreased caloric intake and increased physical activity

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes – 2025. ADA.

ADA Recommendations To Reduce Risk of Cardiovascular Disease

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- In people with no symptoms, routine screening for coronary artery disease is not recommended, as it does not improve outcomes as long as risk factors are treated.
- Measure BP at every routine clinical visit (or at least every 6 months)
- Hypertension is a systolic blood pressure ≥130 mmHg or a diastolic blood pressure ≥80 mmHg based on an average of two or more measurements obtained on two or more occasions.
- Counsel all people with hypertension and diabetes to monitor their blood pressure at home after appropriate education

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes – 2025. ADA.

ADA RECOMMENDATIONS TO REDUCE RISK OF CARDIOVASCULAR DISEASE

- For people with blood pressure >120/80 mmHg
  - Dietary Approaches to Stop Hypertension (DASH) - style eating pattern including reducing sodium (<2,300 mg/day) and increasing potassium intake
  - Decrease or abstain from alcohol – moderate alcohol intake is no more than 2 servings per day in men and no more than 1 serving per day in women),
  - Quit smoking (and/or other nicotine)
  - Increase physical activity (at least 150 min of moderate-intensity aerobic activity per week)
  - Increased consumption of fruits and vegetables (8–10 servings per day) and low-fat dairy products (2–3 servings per day)

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes – 2025. ADA.

ADA Recommendations To Reduce Risk of Cardiovascular Disease

PARTICIPANT

- For people with blood pressure >120/80 mmHg
  - Dietary Approaches to Stop Hypertension (DASH) - style eating pattern including reducing sodium (<2,300 mg/day) and increasing potassium intake
  - Decrease or abstain from alcohol – moderate alcohol intake is no more than 2 servings per day in men and no more than 1 serving per day in women),
  - Quit smoking (and/or other nicotine)
  - Increase physical activity (at least 150 min of moderate-intensity aerobic activity per week)
  - Increased consumption of fruits and vegetables (8–10 servings per day) and low-fat dairy products (2–3 servings per day)

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes – 2025. ADA.

ADA RECOMMENDATIONS TO REDUCE RISK OF CARDIOVASCULAR DISEASE

- For people with lipids not at goal – same recommendations as those with blood pressure >120/80 mmHg, plus:
  - Lifestyle modification focusing on weight loss (if indicated)
  - Application of a Mediterranean or DASH eating pattern
  - Reduction of saturated fat and *trans* fat
  - Increase of dietary n-3 fatty acids, viscous fiber (such as in oats, legumes and citrus), and plant stanol and sterol intake
  - Intensify lifestyle therapy and optimize glycemic management for elevated triglycerides (≥150 mg/dL) and/or low HDL cholesterol (<40 mg/dL for men and <50 mg/dL for women).

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes – 2025. ADA.

ADA RECOMMENDATIONS CHRONIC KIDNEY DISEASE (CKD)

- Assess kidney function (i.e., spot urine albumin-to-creatinine ratio (UACR)) and estimated glomerular filtration rate (eGFR) in all people with type 2 diabetes on an annual basis.
  - Estimate glomerular filtration rate (eGFR) - blood test
  - Urine albumin-creatinine ratio (uACR) – urine test
- If you have CKD, discuss with your provider whether you need to decrease your protein intake.
- Other recommendations are aligned with all the strategies we already discussed to reduce risk of complications.

11. Chronic Kidney Disease and Risk Management: Standards of Care in Diabetes - 2025

CHRONIC KIDNEY DISEASE (CKD)

- Assess kidney function (i.e., spot urine albumin-to-creatinine ratio (UACR)) and estimated glomerular filtration rate (eGFR) in all people with type 2 diabetes on an annual basis.
- 20-40% of people with diabetes have CKD, which may be present at time of diagnosis of T2D[1]
- Diabetes is the leading cause of end-stage kidney disease (dialysis)[1]
- "The only proven primary prevention interventions for CKD in people with diabetes are blood glucose (A1C goal of 7%) and blood pressure management."[2]

1. Centers for Disease Prevention and Control (CDC) National Diabetes Statistics Report. May 2024.
2. 11. Chronic Kidney Disease and Risk Management: Standards of Care in Diabetes – 2025. ADA.

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STAGES OF CHRONIC KIDNEY DISEASE (CKD)

Stages of Chronic Kidney Disease (CKD)	
Stage 1 CKD	eGFR 90 or higher **and** kidney damage (e.g. uACR 30 or higher) for 3 months or more
Stage 2 CKD	eGFR 60-89 **and** kidney damage (e.g. uACR 30 or higher) for 3 months or more
Stage 3a CKD	Mild to moderate loss of kidney function (eGFR 45-59 for 3 months or more)
Stage 3b CKD	Moderate to severe loss of kidney function (eGFR 30-44 for 3 months or more)
Stage 5 CKD	Kidney failure (eGFR less than 15 for 3 months or more) or you are on dialysis

Stages of Chronic Kidney Disease (CKD). National Kidney Foundation. Patient education page – in English and Spanish.

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ADA Recommendations

Smoking/Tobacco Cessation To Reduce Risk of Complications

- Ask people with diabetes routinely about the use of cigarettes or other tobacco products.
- Advise all people with diabetes not to use cigarettes and other tobacco products or e-cigarettes.
- If a participant is ready to quit, recommend and refer for combination treatment consisting of both tobacco/smoking cessation counseling and pharmacologic therapy.

10. Cardiovascular Disease and Risk Management: Standards of Care in Diabetes – 2025. ADA.

ADA RECOMMENDATIONS TO REDUCE RISK OF DIABETIC RETINOPATHY

- Reach and maintain blood glucose, blood pressure, and lipid goals.
- People with type 2 diabetes should have an initial dilated and comprehensive eye examination by an ophthalmologist or optometrist at the time of the diabetes diagnosis.
- If there is no evidence of retinopathy from one or more annual eye exams and glycemic indicators are within the goal range, then **screening every 1–2 years may be considered**. Advise all people with diabetes not to use cigarettes and other tobacco products or e-cigarettes.
- If a participant is ready to quit, recommend and refer for combination treatment consisting of both tobacco/smoking cessation counseling and pharmacologic therapy.

- Diabetic retinopathy (DR) is the **leading cause of blindness in** adults and is the most common microvascular complication of diabetes.
- Control of blood glucose, early detection (annual or bi-annual eye exams) and evidence-based treatment are keys to preserving the sight of people with diabetes and has been **shown to prevent vision loss in more than 90% of people**.

12. Retinopathy, Neuropathy, and Foot Care: Standards of Care in Diabetes—2025

Eye Health. ADA. – patient page

ADA RECOMMENDATIONS

REDUCE RISK OF NEUROPATHY – NERVE DAMAGE

- Diabetic neuropathy is a complication that causes several types of nerve damage throughout the body.
- The ADA recommends that all people with T2D should be assessed for:
  - Diabetic peripheral neuropathy at diagnosis and every year after that.
  - Signs and symptoms of autonomic neuropathy at time of diagnosis and every year after that. (Signs and symptoms include orthostatic dizziness (dizziness when you stand up), syncope (fainting), early satiety (feeling full early in a meal), erectile dysfunction, changes in sweating patterns, or dry cracked skin in the extremities).
- Control glucose, blood pressure, lipids, and weight to reduce risk.

12. Retinopathy, Neuropathy, and Foot Care: Standards of Care in Diabetes—2025

Understanding Neuropathy and Your Diabetes. ADA. – patient page

ADA RECOMMENDATIONS

REDUCE RISK OF FOOT ULCERS AND OTHER PROBLEMS

- Your providers should do a **comprehensive foot exam at least every year** to look for risk factors for ulcers or amputation.
- The ADA recommends **foot exams at every visit** for patients at higher risk of complications.
- STOP SMOKING/TOBACCO USE – if at all possible!

12. Retinopathy, Neuropathy, and Foot Care: Standards of Care in Diabetes—2025

ADA Recommendations Do your Part to Protect your Feet

PARTICIPANT

- Every day! Check your feet for sores, cuts, blisters, corns, or redness; let your provider know if you find any of these.
- Wash and dry feet – especially between your toes – every day.
- Moisturize your feet, but not between your toes; the extra moisture can cause fungus to grow.
- Trim your toenails, if you can reach them, or have someone help you; use an emery board to file down any sharp edges.
- Wear socks that wick moisture away from your feet.
- Make sure there are no sharp object in your shoes before you put them on, and make sure your shoes fit well and don't have any spots that rub your feet.
- Don't smoke or use tobacco/nicotine products; they decrease circulation in your feet.

12. Retinopathy, Neuropathy, and Foot Care: Standards of Care in Diabetes—2025

Foot Complications. ADA. – patient page

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ADA RECOMMENDATIONS
TAKE GOOD CARE OF YOUR MOUTH

- People with diabetes should be referred for a dental exam at least once per year[1].
- Brush your teeth twice per day for at least two minutes, using toothpaste with fluoride.
- Floss once a day at least (twice per day is best)
- Get your teeth cleaned at least twice per year or as often as your dentist recommends cleanings.

1. 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025. ADA. Oral Health. ADA. – participant page

SUBSECTION:
Hypoglycemia and Hyperglycemia

- Hypoglycemia – low blood glucose
- Hyperglycemia – high blood glucose

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Hyperglycemia (High Blood Glucose) Possible Signs and Symptoms

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- Mild hyperglycemia → blood glucose >140–180 mg/dL but <250 mg/dL
  - Often subtle or unnoticed - common symptoms include – increased thirst, increased urination, fatigue or drowsiness, mild headache, intermittent blurred vision, trouble concentrating
- Moderate hyperglycemia → blood glucose around 250–350 mg/dL
  - More noticeable and disruptive - worsening thirst and urination, dry mouth and dry skin, muscle weakness, increased hunger but possible nausea or stomach cramps, blurred vision (persistent), Irritability or mood changes
- Severe hyperglycemia → blood glucose >350–400 mg/dL or even higher
  - Fruity-smelling breath, Rapid, deep breathing (Kussmaul respiration), Severe dehydration (sunken eyes, dry skin, low BP), Vomiting or abdominal pain, Confusion, drowsiness, or unconsciousness, Weak or rapid pulse, labored breathing

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Hyperosmolar Hyperglycemic State (HHS) Recognition, Prevention, and Management

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- ADA Standard of Care: Provide structured education on the recognition, prevention, and management of hyperglycemic crisis to all individuals with type 1 diabetes, those with type 2 diabetes who have experienced these events, and people at high risk for these events.
- HHS is a serious, potentially life-threatening complication of diabetes, especially T2D.
- Plasma glucose ≥ 600 mg/dL
- Causes or triggers:
  - Missed diabetes medications
  - Infection (most common trigger)
  - Acute illness (e.g., stroke, heart attack)
  - Certain medications (e.g., steroids, diuretics)

1. 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025. ADA. Oral Health. ADA. – participant page

HYPERGLYCEMIC CRISIS

- May experience:
  - Polydipsia – thirsty and drinking lots of fluids
  - Polyuria – urinating a lot and frequently
  - Weight loss
  - Vomiting
  - Dehydration
  - Difficulty thinking and processing

1. 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025. ADA.

DIABETIC KETOACIDOSIS (DKA)

- Develops over hours to days
- Person is usually alert
- May experience:
  - Polydipsia – thirsty and drinking lots of fluids
  - Polyuria – urinating a lot and frequently
  - Weight loss
  - Nausea
  - Vomiting
  - Dehydration
  - Kussmaul respiration – deep rapid breathing

Diabetic ketoacidosis (DKA) is life-threatening! Learn the warning signs. Get care immediately.

1. 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025. ADA.

Diabetes & DKA (Ketoacidosis). ADA. – participant page

DIABETIC KETOACIDOSIS (DKA)

- DKA is life-threatening and is caused by too little insulin, which leads to high blood glucose (usually ≥ 200mg/dL) and high ketones in the blood and urine.
- DKA is more common in type 1 diabetes but can also occur in people with type 2 diabetes, especially if risk factors are present:
  - Severe illness or infection
  - Poorly controlled blood glucose
  - Very low insulin production
  - Use of SGLT2 inhibitors (a type of medicine that helps lower blood sugar by making your kidneys get rid of extra sugar through your urine)
  - Dehydration or fasting
  - Alcohol or drug use

1. 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025. ADA.

PARTICIPANT RESOURCES

- Chronic Kidney Disease. National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). Comprehensive page-by-page resource for patients (also excellent training for staff) available in English, French and Spanish. May not be appropriate for people with limited reading literacy.
- Chronic Kidney Disease. CDC. Excellent information for patients and staff.
- Chronic Kidney Disease Tests & Diagnosis. NIDDK. Includes a handy PDF to provide patients with their test results with "Why It Is Important."
- Estimated Glomerular Filtration Rate (eGFR). National Kidney Foundation (NKF).
- Stages of Chronic Kidney Disease. NKF.
- Your Kidneys Don't Want You to Smoke. NKF.
- smokefree.gov. U.S. Department of Health and Human Services. Comprehensive set of smoking cessation materials and resources for patients.

1. 4. Comprehensive Medical Evaluation and Assessment of Comorbidities: Standards of Care in Diabetes – 2025. ADA.

Classification of Hypoglycemia
Table 6.4 from the ADA Standards of Care 2025

GLYCEMIC CRITERIA/DESCRIPTION	
Level 1	Glucose <70 mg/dL (<3.9 mmol/L) and ≥54 mg/dL (≥3.0 mmol/L)
Level 2	Glucose <54 mg/dL (<3.0 mmol/L)
Level 3	A severe event characterized by altered mental and/or physical status requiring assistance for treatment of hypoglycemia, irrespective of glucose level

6. Glycemic Goals and Hypoglycemia: Standards of Care in Diabetes – 2025. ADA. Table 6.4

HYPOGLYCEMIA (LOW BLOOD GLUCOSE)

- Mild to moderate - Blood glucose typically between 54-70 mg/dL
  - Shakiness, sweating, anxiety, irritability, heart palpitations, hunger, dizziness, headache, blurred vision, extreme fatigue, tingling of lips or tongue, weakness, difficulty concentrating or confusion
- Severe - Blood glucose usually <54 mg/dL, often <40 mg/dL
  - Confusion, disorientation, slurred speech, seizures, clumsiness, abnormal behavior, personality changes, fainting, unconscious unresponsive
- Do your family, friends, coworkers, caregivers, or others know how to identify if you're having hypoglycemia and what to do? Signs and symptoms of severe hypoglycemia is a MEDICAL EMERGENCY – dial 911.
- Due to the risk of delayed hypoglycemia after drinking alcohol, be sure to monitor glucose.

RULE OF 15
TO ADDRESS MILD TO MODERATE LOW BLOOD GLUCOSE

- Check your blood glucose if you feel symptoms of hypoglycemia (e.g., shakiness, sweating, irritability, fast heartbeat).
- Treat with 15 grams of fast-acting carbohydrates:
  - 4 oz (½ cup) of regular juice or soda (not diet)
  - 3 - 4 glucose tablets (if you have them
  - 1 tablespoon of sugar or honey
  - 5 - 6 hard candies (like Smarties or LifeSavers)
- Wait 15 minutes, then recheck your blood glucose.
- If it's still below 70 mg/dL, repeat the steps above (another 15 grams, wait 15 minutes, recheck).
- Once your blood sugar is above 70 mg/dL and stable, eat a small snack (like a peanut butter sandwich or cheese and crackers) if your next meal is more than an hour away..

This rule is for **conscious individuals** with mild symptoms. If someone is unconscious or unable to swallow, use glucagon (if available) & call emergency services.

ADA RECOMMENDATIONS
ASSESSMENT & MONITORING – OVERWEIGHT OR OBESITY

- In people with type 2 diabetes and overweight or obesity, weight management should represent a primary goal of treatment along with glycemic management.
- Aim for any magnitude of weight loss but…
  - 3%-7% loss from baseline weight improves glycemia and other risk factors
  - > 10% confers greater benefits, including possible remission of T2D

Note that T2D can be in remission with lifestyle changes and weight loss, when indicated. But T2D CANNOT BE CURED.

8. Obesity and Weight Management for the Prevention and Treatment of Type 2 Diabetes: Standards of Care in Diabetes – 2025. ADA.

WEIGHT MANAGEMENT
A FEW EVIDENCE-BASED POINTERS

- In people with type 2 diabetes and overweight or obesity, weight management should represent a primary goal of treatment along with glycemic management.
- It is not an issue of willpower. Decades of research have demonstrated that body weight is a mix of genetics and environment that shapes our bodies.
- Our brains regulate how much we eat.
- BMI is not a measure of healthy or not healthy
- There is some stigma around BMI; however, it provides a useful if imperfect metric of body fat without the need for expensive equipment or complicated measurements.
- Having a BMI above 30 puts you at risk for diabetes and a long list of other risks – second only to smoking for increasing risk of cancer.

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WEIGHT MANAGEMENT
A FEW EVIDENCE-BASED POINTERS

- We cannot change our DNA, so we need to reshape our environment.
- For example, eliminate or drastically reduce the foods that contribute to our gaining weight; like… no ultraprocessed foods – in shopping cart, fridge and cupboard. This is easy if you live in a neighborhood with good supermarkets but is hard if you don't.
- Low carb diets work because they cut calories.
- However, people with diabetes should not attempt a ketogenic diet unless they are followed by a registered dietician nutritionist (RDN) or other similarly credentialed healthcare professional.
- Getting healthier shouldn't require suffering; it should not be a not a miserable slog. The goal is to provide a healthy number of calories from healthy foods while keeping you satisfied.

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ADA RECOMMENDATIONS
BODY MASS INDEX (BMI)

- "To support the diagnosis of obesity, measure height and weight to calculate BMI and perform additional measurements of body fat distribution, like waist circumference, waist-to-hip ratio, and/or waist-to-height ratio if BMI is indeterminant."
- You may find a participant's BMI in the patient chart, or you can calculate it using the participant's height (can be self-reported) and weight, using an online calculator like the BMI calculator for adults from the National Institute of Health.

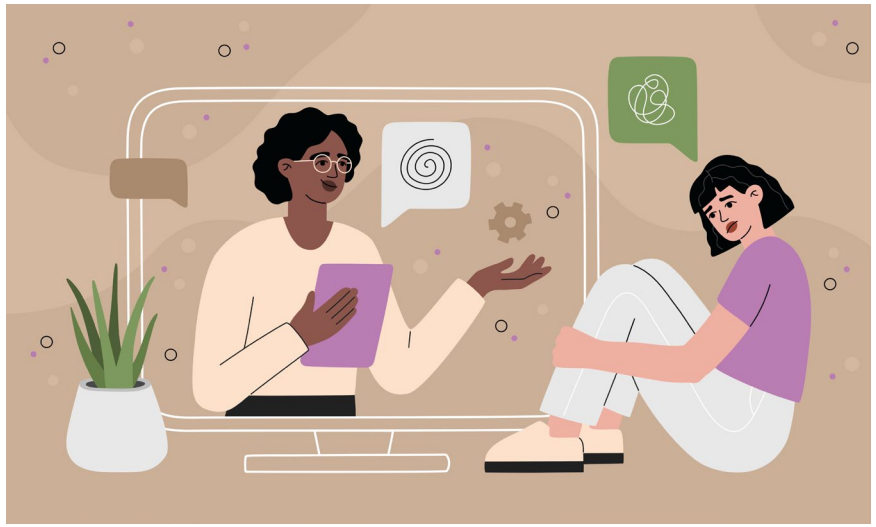
8. Obesity and Weight Management for the Prevention and Treatment of Type 2 Diabetes: Standards of Care in Diabetes – 2025. ADA.

BODY MASS INDEX (BMI)

BMI Range	Category
Below 18.5	Underweight
18.5 - 24.9	Normal weight
25.0 - 29.9	Overweight
30.0 - 34.9	Obesity Class I (Moderate)
35.0 - 39.9	Obesity Class II (Severe)
40.0 and above	Obesity Class III (Very Severe)

While BMI can be helpful, it's a bit harder to identify what the weight range is for each range of BMI for people of different heights. To check the weight range for heights 4 feet 10 inches to 6 feet 3 inches, access this Google sheet - BMI_Weight_Ranges_by_Height. If a participant wants to know what the weight range is for them that is in the normal or overweight BMI range, you can also use this resource to share that information, if desired.

Healthy Coping with Diabetes & Emotional Well-Being



- Identifying and addressing mental health issues
- Strategizing to develop skills to cope with diabetes distress, depression, anxiety, overwhelm and more to optimize self-care and reduce emotional suffering

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ADA RECOMMENDATIONS
DIABETES DISTRESS & ANXIETY

- Screen for diabetes distress at least annually
- Screen for anxiety
  - Fears related to hypoglycemia
  - Concerns with not meeting glycemic goals
  - Concerns about insulin injections or infusion(s)
  - Anxiety of onset of complications

"Diabetes distress refers to significant negative psychological reactions related to emotional burdens and worries specific to an individual's experience in having to manage a demanding chronic condition such as diabetes"[1]

The ADA recommends having screening protocols for diabetes distress, depression, anxiety, fear of hypoglycemia, and disordered behaviors and to refer as needed to behavioral health professionals or other trained health care professionals.

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

ADA RECOMMENDATIONS
DEPRESSION

- Conduct at least annual screening of depressive symptoms in all people with diabetes and more frequently among those with a history of depression. Use age-appropriate, validated depression screening measures, recognizing that further evaluation will be necessary for individuals who have a positive screen.
- Rescreen for depression at diagnosis of complications or when there are significant changes in medical status.
- Refer to qualified behavioral health professionals or other trained health care professionals with experience using evidence-based treatment approaches for depression in conjunction with collaborative care with the diabetes treatment team.

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

ADA RECOMMENDATIONS
OTHER PSYCHOLOGICAL ASSESSMENTS & TREATMENTS

These should be assessed by the provider or other mental health professional

- Disordered eating behavior
- Serious mental illness
- Cognitive capacity and impairment
- Sleep health / sleep disorders, however, the educator can counsel people to practice sleep-promoting routines and habits.

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

PARTICIPANT

ADA RECOMMENDATIONS
STRATEGIES TO DEAL WITH MENTAL STRESS

- Take a breath.
- Get a drink of water
- Sit down
- Lean back
- Shake your arms loose
- Work to silence your busy mind
- Take a walk
- Listen to music
- Stretch or do yoga
- Talk to a friend
- Take a bath
- Read a book
- Join a support group
- Join an online community
- **Remember that there IS a lot that you can control - eating well, managing your weight, exercising, taking your medications, getting regular check ups, and so much more!**

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

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Box Breathing

A Simple Way to Calm Down, Relax, & Feel More in Control

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1. Sit comfortably and relax your shoulders.
2. Close your eyes if you feel safe doing so.
3. Breathe in slowly through your nose while you count to 4.
4. Hold your breath for a count of 4.
5. Breathe out slowly through your mouth for a count of 4.
6. Hold your breath again for a count of 4.
7. That's one full box!
8. Repeat the cycle 3–5 times or as long as you like.

Remember: Inhale (4) → Hold (4) → Exhale (4) → Hold (4)

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PARTICIPANT

ADA RECOMMENDATIONS
SLEEP-PROMOTING ROUTINES AND HABITS

- Establish a regular bedtime and rise time
- Create a dark, quiet area for sleep with temperature and humidity control
- Establish a pre-sleep routing
- Put electronic devices (except diabetes management devices) in silent/off mode
- Exercise during the day
- Avoid daytime naps
- Limit caffeine and nicotine in the evening
- Avoiding spicy foods at night
- Avoid alcohol before bedtime

"…sleep education, or sleep hygiene, improves sleep quality, reduces A1C, and decreases insulin resistance in adults with type 2 diabetes."[1]

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

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Participant Resources

- Mental Health. ADA.
- Health Coping. ADCES. Two-page handout.
- 10 Tips for Coping with Diabetes Distress. CDC.
- Healthy Coping with Diabetes. University of Arkansas for Medical Sciences. (UAMS). Community Health & Research. Two-page handout.

Problem Solving to Find Solutions & Take Action

- Clarifying what, where, and when problems arise related to self-management of diabetes
- Planning in advance to control what you can and to handle life's unexpected challenges

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Challenges & Solutions

What are your top challenges? There are no one-size-fits-all solutions.

What can sabotage eating healthy, getting physical activity, taking your medications, sleeping, getting regular check ups, screenings and tests, and more?

Let's identify your top challenges & brainstorm together to develop realistic, personalized solutions that work for YOU!!

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Potential Starting Questions

- What will you do if you need to be seen by your primary care provider, urgent care, or the emergency department?
- What else do we need to think about if you get sick?
- How will you stay active, eat healthy, and take your medications when you're on vacation, eating out, or attending social events?
  What events or situations tend to disrupt your usual routines?
- What steps will you take if you have unexpected high or low blood glucose readings?
- How can we create a plan for times when stress, fatigue, or emotional health make it harder to manage your diabetes?

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Potential Starting Questions

- What will you do to make sure you:
  - Receive all recommended care and follow-up
  - Take medications as directed and avoid running out
  - Maintain adequate supplies for glucose testing and medications

- What else?

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Resources

- The following slides provide a starting point for finding and using accessible, well-designed resources to support both participants and educators.

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Participant Resources
Diabetes Kickstart Video Series (each is < 4-minutes long)

- Health Eating. 3-minute video from the CDC.
- Being Active. 3-minute video from the CDC.
- Monitoring. 2.5-minute video from the CDC.
- Taking Medicines. ~ 3-minute video from the CDC. (list the questions)
- Lowering Risk. CDC.
- Managing Stress. CDC. Get the list from here. This is an important one to have participants watch.
- Solving Problems. CDC.
- Diabetes Kickstart Handouts for each video.

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Participant Resources

- Shopdiabetes.org. ADA. Numerous patient resources in multiple languages.
- Diabetes Food Hub. ADA. Meal planning, recipes, grocery lists, and more. Some options require creating an account.
- Diabetes Meal Planning. CDC. Great information with links to additional resources. English and Spanish available.
- Diabetes Tracker – Track It to Manage It. Participant resource for recording diabetes-related health measures and noting when the next check is due.

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Participant Resources

- Diabetes Self-Management. Church Health. Online **four-part series** on understanding diabetes, medication, chronic disease management, and nutrition, with both English and Spanish versions (secular and does not include religious content).
- ADCES7 Self-Care Behaviors Resources. Handouts for the seven behaviors in English, Spanish Chinese, French , and Tagalog
- Check out the excellent participant healthy living resources and infographics at Healthy Living on the American Heart Association website. Click around to find all the great resources.
- From the National Heart, Lung, and Blood Institute
  - Maintain a healthy weight
  - Eat a heart-healthy diet
  - Increase physical activity
    - Physical activity tracker (printable PDF)
  - Blood pressure tracker (printable PDF)

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Educator Resource

- An Effective Model of Diabetes Care and Education: The ADCES7 Self-Care Behaviors™. The Science of Diabetes Self-Management and Care. Volume 47, Number 1, February 2021. Revised position statement that includes tables 1-7 that are condense approaches and information around the ADCES7.

Educator Resource
Screening for Food Insecurity

- This two-item food insecurity screener is a validated tool used to identify households at risk for food insecurity[1].
  1. "Within the past 12 months we worried whether our food would run out before we got money to buy more."
  2. "Within the past 12 months the food we bought just didn't last and we didn't have money to get more."

Response Options:
- ❖Often true
- ❖Sometimes true
- ❖Never true

Scoring:
- ❖ If the respondent answers **"often true"** or **"sometimes true"** to **either** statement, it is considered a **positive screen** for food insecurity.

- This tool is commonly used in clinical settings because it is brief, easy to administer, and highly predictive of food insecurity risk.

1. Hager ER, Quigg AM, et al. Development and validity of a 2-item screen to identify families at risk for food insecurity. Pediatrics 2010;126. This screener has a sensitivity of 97% and specificity of 83%.

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ADA Standards of Care in Diabetes - 2025

- Standards of Care PDF (358 pages)
- Abridged Standards of Care PDF (45 pages)
- Standards of Care Online Version (easy to navigate)
- Standards of Care in Diabetes - 2025 Abridged for Primary Care Online Version – (easy to navigate and includes different graphics than the full version)
- Standards of Care: Slide Deck (349 slides)
- Abridged Standards of Care: Slide Deck (112 slides)
- Standards of Care App

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