



Caring for people with diabetes: A fresh look at an old disease

BY MARTHA M. FUNNELL, MS, RN, CDCES, FAAN; KATHERINE K. KLOSS, MS, RDN, CDCES; AND ROBIN B. NWANKWO, MPH, RDN, CDCES

Abstract: This article describes current evidence-based approaches to the care and education of adults living with diabetes. It also highlights revisions in the 2022 Standards of Care and evidence-based strategies nurses can use to be more effective.

Keywords: diabetes, patient education, person-centered care, standards of care

From 2020 through 2022, public health services, health systems, nursing organizations, and nurses have appropriately focused on the COVID-19 pandemic and the acute and ongoing care required for this disease.¹ The pandemic has also served as a reminder that, like other diseases, the risk, acuity, and outcomes are not equally distributed

across the population. For example, people with a greater risk of developing COVID-19 and becoming severely ill or developing at least one severe outcome include those with type 1 and type 2 diabetes, obesity (a BMI greater than or equal to 30), older adults, and those in underserved communities.¹ Clearly, treating and managing chronic diseases

such as type 1 and type 2 diabetes must remain a priority, not only while treating persons with COVID-19 but as part of daily self-management and clinical care.

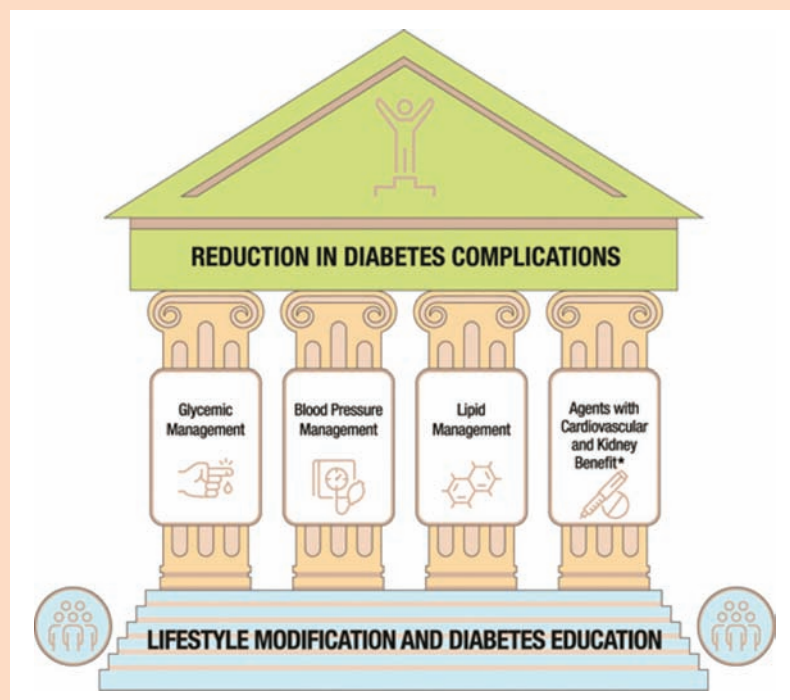
For at least the past 30 years, the American Diabetes Association (ADA) has convened a panel of experts in nursing, behavior, psychology, nutrition, pharmacy, and medicine to review the results of the latest scientific diabetes research and clinical trials to update the Standards of Medical Care in Diabetes.² Two other major documents have also been published in collaboration with organizations including the ADA and the Association of Diabetes Care and Education Specialists (ADCES): the 2022 National Standards for Diabetes Self-Management Education and Support (DSMES)³ and a consensus report entitled Diabetes Self-Management Education and Support in Adults With Type 2 Diabetes.⁴ These documents provide important and current evidence-based guidance for institutional policies, practice, and nursing care.

What is new in diabetes?

In recent years, person-centered care and education have become the recommended approach to caring for people with diabetes.²⁻⁵ The importance of this shift has been supported and emphasized in each of these documents by providing specific changes in practice, non-stigmatizing language, and personalized strategies to make person-centered care a reality.^{6,7} Specifically, care should be provided by an interdisciplinary team that makes timely treatment decisions in collaboration with a patient based on a patient's preferences and current evidence.²

The 2022 Standards of Medical Care are based on a four-pronged approach with the ultimate goal of reducing the number of devastating and costly long-term complications and optimizing the quality of life.² The basis for this approach includes lifestyle and diabetes education to

Four pillars of diabetes care and education²



Reprinted with permission of the American Diabetes Association, Inc. Copyright 2022

support each of these four pillars (see *Four pillars of diabetes care and education*).

To address and support the emphasis on effective education as the basis for all four pillars, the 2022 National Standards for DSMES identify the need to provide personalized educational services that recognize cultural differences, social determinants of health, and technology engagement. In addition, patient education is needed to integrate all aspects of self-management, decision-making, behavioral change, and emotional concerns.^{3,4} Along with the continuing recommendation that all people with diabetes participate in DSMES education, the consensus report identifies four specific times that adults with type 2 diabetes should be referred by their provider to a formal DSMES program or a certified or recognized educational service.²⁻⁴

Each of the specific sections in the ADA Medical Standards of Care has

been updated.² While some changes were made for clarity, others are substantial and need to be considered when teaching and caring for people with diabetes and are discussed in more detail.

Screening and diagnosis

Diagnostic criteria for diabetes and prediabetes have remained the same (see *Diagnostic criteria*).² Fasting plasma glucose (FPG), 2-hour plasma glucose after a 75-g glucose load (oral glucose tolerance test [OGTT]), and A1C are still used for screening. If point-of-care A1C results are used for screening, the results should be confirmed by a validated, standardized measure. In certain circumstances, only plasma blood should be used for diagnoses, such as for patients who have HIV or conditions associated with increased red blood cell turnover such as sickle cell disease, second- or third-trimester pregnancy, hemodialysis, recent blood

Diagnostic criteria²

Prediabetes

- FPG 100-125 mg/dL (5.6-6.9 mmol/L)
- 2-h PG during 75-OGTT 140-199 mg/dL (7.8-11.0 mmol/L)
- A1C 5.7%-6.4% (39-47 mmol/mol)

Diabetes

- FPG ≥ 126 mg/dL (7.0 mmol/L)
- 2-h PG during 75-OGTT ≥ 200 mg/dL (11.1 mmol/L)
- A1C $\geq 6.5\%$ (48 mmol/mol)
- Classic symptoms of hyperglycemia or hyperglycemic crisis; a random plasma glucose ≥ 200 mg/dL (11.1 mmol/L).

loss, or transfusion. Unless a person has classic symptoms with random plasma glucose of at least 200 mg/dL, the diagnosis requires two abnormal results, either from the same sample or in two separate samples.

One of the important changes this year is that screening for all adults should begin at age 35.² Screening continues to be recommended for adults of any age who are overweight or obese, have one or more diabetes risk factors, or are in a high-risk group, such as patients who are of Black, Hispanic, Native American, Asian American, or Pacific Islander ethnicity, and women with a history of gestational diabetes.² Because both prediabetes and type 2 diabetes can have long presymptomatic periods, nurses can help patients understand their risk through an assessment or questionnaire such as the ADA type 2 diabetes risk test.^{2,8} In addition, women at risk for diabetes should be screened before conception or before their 15th week of pregnancy.

People who are diagnosed with prediabetes after screening should be referred to an educational program consistent with the Diabetes Preven-

tion Program to delay type 2 diabetes and improve cardiometabolic markers.² These evidence-based programs focus on physical activity and weight loss, are a covered benefit of Medicare Part B, and are often a covered benefit of insurance and Medicaid plans.

Caring for people with diabetes

Strategies to care for people with diabetes are based on each of the Four Pillars. The goal for A1C remains less than 7.0% for nonpregnant adults without significant hypoglycemia and less than 8% for those with limited life expectancy (see *Recommended A1C, BP, and lipids for nonpregnant adults with diabetes*).²

Pharmacotherapy

Along with advances in diabetes-related technologies and new medications, added indications for current medications provide more options for both treating and preventing diabetes and its complications.² The pillar “medications with cardiovascular and kidney benefit” was added based on recent evidence about these benefits for both the sodium-glucose cotransporter 2 (SGLT2) inhibitors

and glucagon-like peptide 1 (GLP-1) receptor agonists. This change is significant and provides new hope for people with type 2 diabetes. Recently, some of these medications have been approved to treat cardiovascular disease (CVD) for those without diabetes as well.⁹

Most people with type 2 diabetes begin treatment at the time of diagnosis with metformin along with a referral to a certified or recognized DSMES program that focuses on lifestyle through behavioral, psychosocial, and distress management strategies.² Other medications, such as SGLT2 inhibitors and GLP-1 receptor agonists, are now recommended as initial therapy with or without metformin for those who are diagnosed or have a high risk for CVD, heart failure, or chronic kidney disease.^{2,9}

A person-centered approach is used to guide the choice of initial and subsequent medications. These include patient preferences, cost and access, cardiovascular and renal comorbidities, efficacy, risk, impact on weight, and hypoglycemia risk such as falls.² Because many patients express frustration and distress when multiple oral medications, GLP-1 receptor agonist injections, or insulin are needed, nurses need to prepare patients for this occurrence. It is critical to stress that the need for additional medications is not a failure nor is it the patient's fault; rather, it is the result of the normal and expected trajectory of diabetes.¹⁰

Adults with type 1 diabetes should be treated with multiple injections of insulin, including rapid

Recommended A1C, BP, and lipids for nonpregnant adults with diabetes²

Premeal blood glucose	80-130 mg/dL
Postmeal blood glucose	<180 mg/dL
BP	<140/90 mm Hg
HDL cholesterol (women)	>50 mg/dL
HDL cholesterol (men)	>40 mg/dL
Triglycerides	≤ 150 mg/dL

insulin analogues or continuous subcutaneous insulin infusion (CSII) pumps and a continuous glucose monitor (CGM).² All adults using flexible insulin programs should also be offered the opportunity to learn how to match mealtime doses with carbohydrate intake, fat, and protein content and anticipated exercise. Adults using fixed insulin doses should be taught the benefits of consistent timing, amount, and type of carbohydrates.²

Nurses must periodically review the timing of medications with the other aspects of self-management, such as meals, exercise, and monitoring; assess injection technique; and inspect for lipohypertrophy.² Evidence supports using short insulin needles (4 mm) with adults, even for those who are overweight or obese.¹¹ The signs and symptoms and “Rule of 15” treatment for hypoglycemia should be reviewed with patients who take insulin and sulfonylureas, as well as the importance of diabetes identification, such as medical-alert jewelry (see *Rule of 15s: Treatment for hypoglycemia*).² Patients who do not experience early symptoms of hypoglycemia should be offered a prescription for glucagon.²

The cost of all diabetes medications including insulin has been an area of robust advocacy efforts by the ADA, ADCES, and other organizations. Several biosimilar insulins have been approved by the FDA

Nutrition recommendations: ADA and USDA

- Choose foods that are meaningful and pleasurable.
- Emphasize nonstarchy, fiber-rich, whole-grain carbohydrates (vegetables and fruit) with minimal added sugars and refined grains.
- Choose whole foods over highly processed foods.
- Choose water or unsweetened beverages over sugar-sweetened beverages.
- Limit alcoholic beverages (1 drink per day for women; 2 drinks per day for men).

and others are being studied.² These insulins are considered interchangeable because there are no clinically meaningful differences between these and other currently available insulins and are less expensive. However, the prescription has to be written specifically for these products.

Meals, snacks, and beverages

Because the ideal percentage for protein, fat, and carbohydrate is unknown, there is no recommended “diabetic” or “ADA diet” (see *Nutrition recommendations: ADA and USDA*).^{2,12,13} Instead, a patient-centered approach is used to teach a variety of dietary patterns to manage glucose levels, prevent CVD, and support weight management (see *Key nutrition education messages*). Dietary patterns that are shown to yield positive health outcomes are Mediterranean, Dietary Approaches to Stop Hypertension (DASH), and plant-based.¹²⁻¹⁴ It is recommended that carbohydrates emphasize fiber (at least 14 g/1,000 kcal), are minimally processed, and are nutritionally dense.^{2,13} Nutrient-

dense foods provide vitamins and minerals and have little to no added sugars, saturated fat, and sodium.¹³

The goals for medical nutrition therapy are:²

- Emphasize a variety of nutrient-dense foods in appropriate portions to achieve weight and other health outcomes and delay or prevent complications
- Address personal and cultural preferences; access; willingness, ability, and barriers to making changes; and health literacy and numeracy
- Maintain the pleasure of eating by providing nonjudgmental messages about choices
- Provide practical tools for developing healthy eating patterns that fit well with life and priorities, rather than focusing on individual foods or nutrients

The nutritional assessment should begin with a discussion of personal goals, access, medications, food habits, preferences, culture, social determinants of health, and other priorities.¹² Nutritional education should focus on integrating food choices with other aspects of self-management, such as timing, exercise, and mood; treatment (medications); as well as making and evaluating food decisions. It is recommended that all patients be referred to a Registered Dietitian Nutritionist (RDN) or a DSMES program at diagnosis and as needed.^{2,4,12,13} Regular measures of weight and BMI are recommended to monitor comorbidities (such as CVD) and evaluate treatment decisions.

Obesity is a chronic disease that is exacerbated by diabetes and further increases susceptibility to CVD and

Rule of 15s: Treatment for hypoglycemia (blood glucose ≤ 70 mg/dL)

- Check blood glucose (if possible).
- Treat with 15 g of glucose tablets or fast-acting carbohydrates such as juice or regular soda*.
- Wait 15 minutes then recheck blood glucose.
- If the blood glucose is still less than or equal to 70 mg/dL or symptoms continue, retreat with 15 g of carbohydrate and recheck blood glucose after 15 minutes.
- If the initial blood glucose is less than or equal to 54 mg/dL, treat with 30 g of carbohydrate.

*Foods with fat or protein, such as chocolate, milk, can delay the response

COVID-19 infections.¹⁵ Recent studies have shown that weight gain increased by 1.5 lb per month during the COVID-19 stay-at-home period.¹⁶

Weight loss can increase sensitivity to insulin and lower blood glucose and A1C levels. Within the first 6 years of a diagnosis of diabetes, losing 22 lb (10 kg) can result in remission.¹⁷ For those with type 2 diabetes, strategies to reduce weight include lifestyle interventions with a focus on caloric restriction to achieve about a 5% weight reduction; moderate exercise such as walking, biking, and yoga for 150 minutes or more per week; and behavioral counseling.² This level of weight loss has been shown to reduce the need for additional diabetes medications and slow the progression from prediabetes to type 2 diabetes. Additional weight loss usually results in further reductions in A1C and CVD risk.²

Because of the stigma of both obesity and type 2 diabetes, the 2022 Standards stress the need to use

person-centered, nonjudgmental language, such as “person with obesity” or “person with diabetes” rather than “diabetic.”² Long-term weight loss requires ongoing counseling, so referral to continuing weight maintenance programs (in-person, virtual, or self-monitored) is essential.

Additional strategies for weight loss include medications and metabolic surgery. First, consider alternatives to medications that contribute to weight gain such as sulfonylureas or insulin. There are a growing number of medications that support weight loss and can improve blood glucose levels, including GLP-1-based therapies such as liraglutide and semaglutide, orlistat, phentermine-topiramate extended-release (ER), and naltrexone-bupropion ER. Metabolic surgery promotes durable weight loss and can lead to remission of diabetes and reduction in CVD risk. Common surgeries include the Roux-en Y gastric bypass and the vertical sleeve gastrectomy. People who choose surgery

should receive long-term medical and behavioral support and routine monitoring for micronutrient, nutritional, and metabolic status.²

Diabetes Technology

Not long ago, diabetes technology referred to insulin administration methods (syringe, pen, and CSII pumps) and blood glucose monitoring (BGM). Today, people of all ages living with diabetes have a range of technology to support their efforts. The software, hardware, and devices used by patients in managing their diabetes changes rapidly so education, training, and follow-up support are crucial for the successful use of these technologies.^{2,3} In addition, nurses can ask patients how they use the information from BGM to make and evaluate their self-management decisions or teach structured monitoring strategies, such as before and 2 hours after eating, to help them get more benefit from older technologies.¹⁸

Young persons with type 1 diabetes and adults of all ages with type 1 and type 2 diabetes using insulin may benefit from regularly wearing a real-time CGM device or using CSII pumps.² Recent data have shown decreased A1C for both type 1 and type 2 diabetes and lower incidences of hypoglycemia for those with type 1 diabetes using these devices.¹⁹ Some CGMs are linked with CSII pumps and can respond to elevated and low blood glucose levels. Other devices can be programmed to communicate glucose levels with smartphones and others, such as parents or caregivers.

Improved insurance coverage is making these technologies more available and accessible. For example, Medicare coverage for CGM is now available for those who have either type 1 or type 2 diabetes and intensively manage insulin or use CSII pumps. One of the benefits of the growing use of CGM and the newer focus on time in range (TIR)

Key nutrition education messages

- No one diet is recommended for diabetes.
- Moderation is key. No food is required or forbidden.
- Plan ahead for your visit to a dietitian. Bring a list of foods that you eat routinely and those that are important for your culture, family, or lifestyle.
- Monitoring your blood glucose levels before and 2 hours after you eat provides useful information about the effects of food and whether your medication type, dose, and timing are matched with your meals.
- Use the total carbohydrate content on food labels when counting or monitoring carbohydrates.
- If your meal plan does not work for your life, family, or culture, then it does not work and needs to be changed.
- Let family members and friends know how they can help you so that they do not become the “diabetes police.”
- There is no such thing as “cheating on your diet.” As an adult, you have the right to make decisions about what you eat and to evaluate your own results.
- Keep a record of your food intake and what occurs when you eat them. Knowing why you chose to eat is as important as knowing what you ate.
- Make changes one step at a time. Focus on specific behaviors to change, such as not eating while watching TV, rather than outcomes such as pounds lost.
- There is no one best or right way to handle holidays or special events. Make a plan ahead of time for how you will manage. Evaluating the result will help you plan for the next occasion.
- No one expects you to be perfect. If one day does not go well or as planned, forgive yourself and start over the next day.

and glucose variability is that both healthcare professionals and patients can better understand A1C results, the risk of complications, treatment efficacy, and decisions.² For an A1C less than 7%, the TIR of 80-180 mg/dL is recommended more than 70% of the time, below 70 mg/dL less than 4% time, and below 54 mg/dL less than 1% of the time. Glucose variability should not exceed 36%.² This technology allows nurses to provide real-time education to help patients appreciate variabilities in blood glucose levels and to make and evaluate their self-management decisions.

These CGM devices have also been approved for inpatient hospital use by the FDA. While some hospitals used CGM to minimize staff contact with people with COVID-19, there are no data to support or discourage this practice as of November 2022.²

Smart insulin pens can be used by persons with type 1 or type 2 diabetes. These pens connect to a smartphone app to calculate and track doses and provide reminders, alerts, and reports to the patient or care team. They are available as either a reusable pen or an adapter for a current pen.

Diabetes Self-Management Education and Support (DSMES)

The 2022 Standards for DSMES⁴ stress person-centered education and care planning that are based on an assessment of health status, learning level including literacy and numeracy, lifestyle, and psychosocial adjustments such as diabetes distress and depression.²⁻⁷ It is recommended that people with diabetes be referred for DSMES at least four times: at diagnosis, annually or when not meeting goals or targets, when complicating factors develop that influence self-management, and when transitions in life and care occur.^{2,4} DSMES has been shown to improve diabetes knowledge and self-management behaviors, outcomes, and quality of

5 M's Framework for diabetes self-management and decision-making

- **Medicines:** Type and dose
- **Mood:** Emotions, diabetes, distress, stress, and physical stress
- **Meals:** Foods, portions, snacks, and beverages
- **Movement:** Physical activity and exercise
- **Minutes:** Timing of medicines, meals, and movement

life.² Although the referral needs to be initiated by the provider, it is incumbent on nurses to provide contact information for DSMES services as part of care and discharge planning.

DSMES provides patients with “the knowledge, skills, and confidence to accept responsibility for their self-management. This includes collaborating with their healthcare team, making informed decisions, solving problems, developing personal goals and action plans, and coping with emotions and stresses.”⁵ A complete patient-centered DSMES program addresses all seven self-management behaviors: healthy coping, healthy eating, being active, taking medication, monitoring, reducing risks, and problem-solving.^{3,4,20,21}

In addition to encouraging patients to attend a formal DSMES program, nurses have a critical role in providing ongoing education and support.^{2,4,5} At each encounter, nurses can assess distress, strengths, and barriers, and provide information about local resources that provide support for self-management such as reliable internet sites and support programs led by either community health workers or peers.⁴

People with diabetes make multiple decisions each day that affect their health outcomes and quality of life. Therefore, nurses must teach patients how to make and evaluate their many daily self-management decisions.

A practical strategy for providing this real-time assessment and education is to use the 5 M's Framework for Diabetes Self-Management and

Decision Making (see *5 M's Framework for diabetes self-management and decision-making*).

Nurses can use this framework to assess, structure, and organize messages when providing education. Patients can also use this framework to connect the multiple aspects of self-management, make informed and wise decisions, and evaluate their subsequent outcomes such as blood glucose readings.²²

A new recommendation in the 2022 Standards of Medical Care is to consider assessing cognition and depression among adults 65 years of age and older. People with diabetes at all ages are at risk for experiencing distress, stress, and clinical depression. Because of the independent effect of these issues on diabetes outcomes, routinely assessing, acknowledging, and addressing the emotional burden of living with and managing diabetes is recommended, especially at the onset of complications or when treatment goals are not met.^{2,3-5,23} Nurses can integrate psychosocial care into person-centered care by asking questions like, “What are your day-to-day thoughts about living with diabetes?” and “What are your experiences with feeling burdened or overwhelmed because of your diabetes?”^{2,21} Nurses may also use simple, standardized measurements.²³

Nurses are key

As care providers and advocates, nurses are critical in decreasing the number of complications from diabetes and improving patients' quality of life. Along with making certain that

practices are current and evidence-based, nurses must support our patients in making wise and informed self-management decisions. Using person-centered communication skills, nonjudgmental and nonstigmatizing language, and educational styles that build on strengths and address the burden of living with and caring for diabetes is consistent with the evidence, value, and unique role as nurses. ■

REFERENCES

- Centers for Disease Control and Prevention. Underlying medical conditions associated with higher risk for severe COVID-19: information for healthcare professionals. www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-care/underlyingconditions.html.
- American Diabetes association. Standards of Medical Care in Diabetes—2022 Abridged for Primary Care Providers. *Clin Diabetes*. 2022;40(1):10-38. doi:10.2337/cd22-as01.
- Davis J, Fischl AH, Beck J, et al. 2022 national standards for diabetes self-management education and support. *Sci Diabetes Self Manag Care*. 2022;48(1):44-59. doi:10.1177/26350106211072203.
- Powers MA, Bardsley JK, Cypress M, et al. Diabetes self-management education and support in adults with type 2 diabetes: a consensus report of the American Diabetes Association, the Association of Diabetes Care & Education Specialists, the Academy of Nutrition and Dietetics, the American Academy of Family Physicians, the American Academy of PAS, the American Association of Nurse Practitioners, and the American Pharmacists Association. *Diabetes Care*. 2020;43(7):1636-1649. doi:10.2337/dci20-0023.
- Funnell MM, Freehill K. Keeping up-to-date with diabetes care and education. *Nursing*. 2018;48(10):22-29. doi:10.1097/01.nurse.0000545015.98790.27.
- Dickinson JK, Funnell MM. Diabetes: changing the conversation. *Nursing*. 2019;49(6):56-60. doi:10.1097/01.nurse.0000554614.92598.fb.
- Dickinson JK, Guzman SJ, Maryniuk MD, et al. The use of language in diabetes care and education. *Diabetes Care*. 2017;40(12):1790-1799. doi:10.2337/dci17-0041.
- American Diabetes Association. 2022. www.diabetes.org/risk-test.
- Cardoso R, Graffunder FP, Ternes CMP, et al. SGLT2 inhibitors decrease cardiovascular death and heart failure hospitalizations in patients with heart failure: a systematic review and meta-analysis. *EClinicalMedicine*. 2021;36:100933. doi:10.1016/j.eclinm.2021.100933.
- Riddle M, Peters A, Funnell M. Increasing patient acceptance and adherence toward insulin. *Postgrad Med*. 2016;128(suppl 1):11-20. doi:10.1080/00325481.2016.1177969.
- Heinemann L, Nguyen T, Bailey TS, et al. Needle technology for insulin administration: a century of innovation. *J Diabetes Sci Technol*. [e-pub Dec. 10, 2021]
- Kloss KA, Funnell MM, Piatt GA, Nwankwo R. One size does not fit all. *Nursing*. 2020;50(8):32-38. doi:10.1097/01.nurse.0000684176.14404.ff.
- Evert AB, Dennison M, Gardner CD, et al. Nutrition therapy for adults with diabetes or prediabetes: a consensus report. *Diabetes Care*. 2019;42(5):731-754. doi:10.2337/dci19-0014.
- Watts SA, Stevenson C, Patterson J. What does the evidence say about the Mediterranean diet? *Nursing*. 2018;48(3):50-54. doi:10.1097/01.nurse.0000530407.38450.a3.
- Zhou Y, Chi J, Lv W, Wang Y. Obesity and diabetes as high-risk factors for severe coronavirus disease 2019 (Covid-19). *Diabetes Metab Res Rev*. 2021;37(2). doi:10.1002/dmrr.3377.
- Gregg EW, Sophiea MK, Weldegiorgis M. Diabetes and covid-19: population impact 18 months into the pandemic. *Diabetes Care*. 2021;44(9):1916-1923. doi:10.2337/dci21-0001.
- Thom G, Messow C-M, Leslie WS, et al. Predictors of type 2 diabetes remission in the Diabetes Remission Clinical Trial (DiRECT). *Diabet Med*. 2021;38(8). doi:10.1111/dme.14395.
- Polonsky WH, Fisher L, Schikman CH, et al. Structured self-monitoring of blood glucose significantly reduces A1C levels in poorly controlled, noninsulin-treated type 2 diabetes. *Diabetes Care*. 2011;34(2):262-267. doi:10.2337/dci10-1732.
- Cappon G, Vettoretti M, Sparacino G, Facchinetti A. Continuous glucose monitoring sensors for diabetes management: a review of technologies and applications. *Diabetes Metab J*. 2019;43(4):383-397. doi:10.4093/dmj.2019.0121.
- Association of Diabetes Care and Education Specialists, Kolb L. An effective model of diabetes care and education: the ADCES7 self-care behaviors™. *Sci Diabetes Self Manag Care*. 2021;47(1):30-53. doi:10.1177/0145721720978154.
- Funnell MM, Kloss KA, Nwankwo RB. *Life with Diabetes: A Series of Teaching Outlines*. 6th ed. Alexandria, VA: American Diabetes Association; 2020:ix-xvii.
- Kloss KA, Funnell MM, Nwankwo R. Going beyond education: a practical framework for diabetes self-management and decision-making. *ADCES Pract*. 2022. doi:10.1177/2633559X221114871.
- Fisher L, Polonsky WH, Hessler D. Addressing diabetes distress in clinical care: a practical guide. *Diabet Med*. 2019;36(7):803-812. doi:10.1111/dme.13967.

At the University of Michigan, Martha Funnell is an emeritus research scientist in the department of learning health sciences, Katherine Kloss is a research area specialist lead in the school of social work, and Robin Nwankwo is a consultant in nutrition and diabetes self-management education.

The authors and planners have disclosed no potential conflicts of interest, financial or otherwise.

DOI-10.1097/01.NURSE.0000884536.18596.9e

For more than 64 additional nursing continuing professional development activities related to Diabetes & endocrine topics, go to NursingCenter.com/ce.

Lippincott®
NursingCenter®

NCPD Nursing Continuing
Professional Development

INSTRUCTIONS

Caring for people with diabetes: A fresh look at an old disease

TEST INSTRUCTIONS

- Read the article. The test for this nursing continuing professional development (NCPD) activity is to be taken online at www.nursingcenter.com/CE/nursing. Tests can no longer be mailed or faxed.
- You'll need to create an account (it's free!) and log in to access My Planner before taking online tests. Your planner will keep track of all your Lippincott Professional Development online NCPD activities for you.
- There's only one correct answer for each question. A passing score for this test is 7 correct answers. If you pass, you can print your certificate of earned contact hours and access the answer key. If you fail, you have the option of taking the test again at no additional cost.
- For questions, contact Lippincott Professional Development: 1-800-787-8985.
- Registration deadline is September 5, 2025.

PROVIDER ACCREDITATION

Lippincott Professional Development will award 2.0 contact hours for this nursing continuing professional development activity. Lippincott Professional Development is accredited as a provider of nursing continuing professional development by the American Nurses Credentialing Center's Commission on Accreditation. This activity is also provider approved by the California Board of Registered Nursing, Provider Number CEP 11749 for 2.0 contact hours. Lippincott Professional Development is also an approved provider of continuing nursing education by the District of Columbia, Georgia, West Virginia, New Mexico, South Carolina, and Florida, CE Broker #50-1223. Your certificate is valid in all states.

Payment: The registration fee for this test is \$21.95.