

ECHO Diabetes and Metabolic Conditions:

Turning Prediabetes into Prevention Through Real World Tools, Programs and Patient Support - 09/17/2026

Nanci G. Jenkins, PhD, RDN, LD

None of the planners or presenters for this educational activity have relevant financial relationship(s) to disclose with ineligible companies whose primary business is producing, marketing, selling, re-selling, or distributing healthcare products used by or on patients.



Disclosures

- NONE

Agenda

- I. History
- II. Current Understanding
- III. Tools & Programs (General & Local)
- IV. Patient Perspective & Support
- V. Final Tips & Takeaways
- VI. References



I. History of “a little sugar”

Late 1970s: Researchers used terms like impaired glucose tolerance (IGT)

1997-2003: The ADA and the WHO categorized intermediate blood sugar levels as "impaired fasting glucose" or "impaired glucose tolerance".

2004: The ADA officially adopted the broad term **prediabetes** for **fasting blood glucose levels of 110–125 mg/dL or an A1C of 6% to 6.4%.**

2010: The ADA lowered the diagnostic thresholds to a **fasting glucose of 100–125 mg/dL and the A1C range of 5.7% to 6.4%,** which is the standard used today.

II. Prediabetes Definition

“**Prediabetes** is the term used to identify glucose or A1C levels that **do not meet the criteria for diabetes** yet fall in an intermediate **range between normoglycemia and diabetes**”



Table 2.5 Criteria for screening for diabetes or prediabetes in asymptomatic adults

1. Testing should be considered in adults with overweight or obesity ($\text{BMI} \geq 25 \text{ kg/m}^2$ or $\geq 23 \text{ kg/m}^2$ in individuals of Asian ancestry) who have one or more of the following risk factors:	
• First-degree relative with diabetes	
• High-risk race, ethnicity, and ancestry (e.g., African American, Latino, Native American, Asian American)	
• History of cardiovascular disease	
• Hypertension ($\geq 130/80 \text{ mmHg}$ or on therapy for hypertension)	
• HDL cholesterol level $< 35 \text{ mg/dL}$ ($< 0.9 \text{ mmol/L}$) and/or triglyceride level $> 250 \text{ mg/dL}$ ($> 2.8 \text{ mmol/L}$)	
• Individuals with polycystic ovary syndrome	Polyendocrine metabolic ovarian syndrome (PMOS)
• Physical inactivity	
• Other clinical conditions associated with insulin resistance (e.g., severe obesity, acanthosis nigricans, metabolic dysfunction-associated steatotic liver disease)	
2. People with prediabetes ($\text{A1C} \geq 5.7\%$ [$\geq 39 \text{ mmol/mol}$], IGT, or IFG) should be tested yearly.	
3. People who were diagnosed with GDM should have testing at least every 1–3 years.	
4. For all other people, testing should begin at age 35 years.	
5. If results are normal, testing should be repeated at a minimum of 3-year intervals, with consideration of more frequent testing depending on initial results and risk status.	
6. Individuals in other high-risk groups (e.g., people with HIV, exposure to high-risk medicines, evidence of periodontal disease, history of pancreatitis) should also be closely monitored.	



GDM, gestational diabetes mellitus; IFG, impaired fasting glucose; IGT, impaired glucose tolerance.

2.12b For all other people, screening should begin at age 35 years. **B**

2.12c In people without prediabetes or diabetes after screening, repeat screening recommended at a minimum of 3-year intervals is reasonable, sooner with symptoms or change in risk (e.g., weight gain). **C**

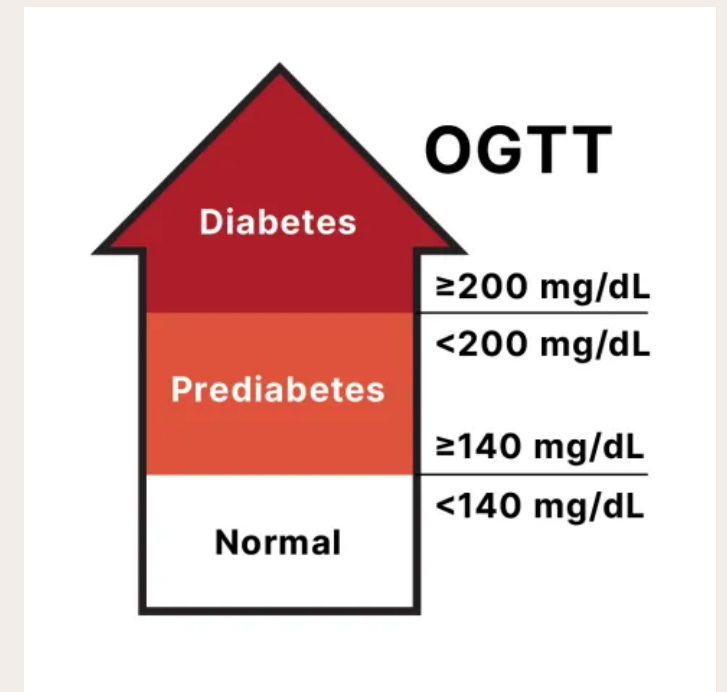
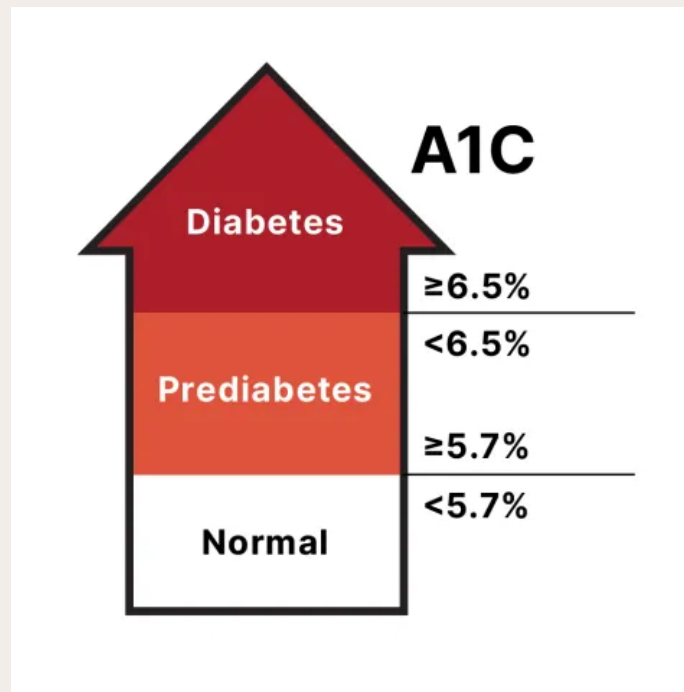
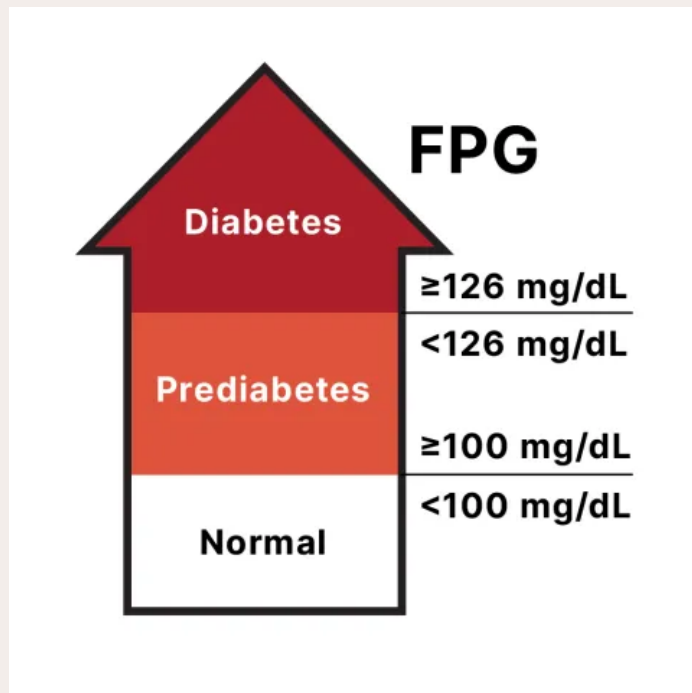


The *Standards of Care in Diabetes* offers concise, evidence-based guidance for improving patient outcomes.

2026 Now Available

American Diabetes Association

Prediabetes- Diagnosis



Associated Health Risks

Prediabetes is associated with a higher risk of T2DM, CVD, Metabolic associated steatohepatitis (MASH), Metabolic associated steatotic liver disease (MASLD), and Chronic Kidney Disease (CKD).



Lifestyle Interventions are the cornerstone of treatment



In many cases, prediabetes can be stopped from progressing or reversed with lifestyle changes

Healthy Meal Pattern

Weight loss of 5-7%

Physical Activity (Movement)
≥150 minutes/wk



Standards of Care in Diabetes—2026



Recommendations

3.1 In people with prediabetes, monitor for the development of diabetes at least annually; modify frequency of testing based on individual risk assessment. **E**

3.2 In people with presymptomatic type 1 diabetes, monitor for disease progression using A1C approximately every 6 months and 75-g oral glucose tolerance test (i.e., fasting and 2-h plasma glucose) annually; modify frequency of monitoring and consider augmenting with other glycemic assessment tools such as continuous glucose monitoring metrics based on individual risk assessment incorporating age, number and type of autoantibodies, and glycemic metrics. **E**

❖ Metabolic Syndrome

*Elevated blood sugar

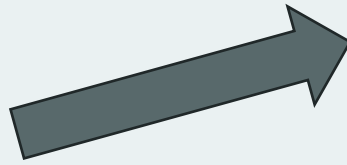
***Insulin resistance**

*High blood pressure

*High levels of triglycerides

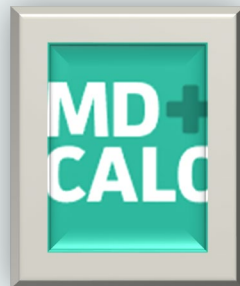
*Low levels of high-density lipoprotein (HDL) cholesterol

*Obesity



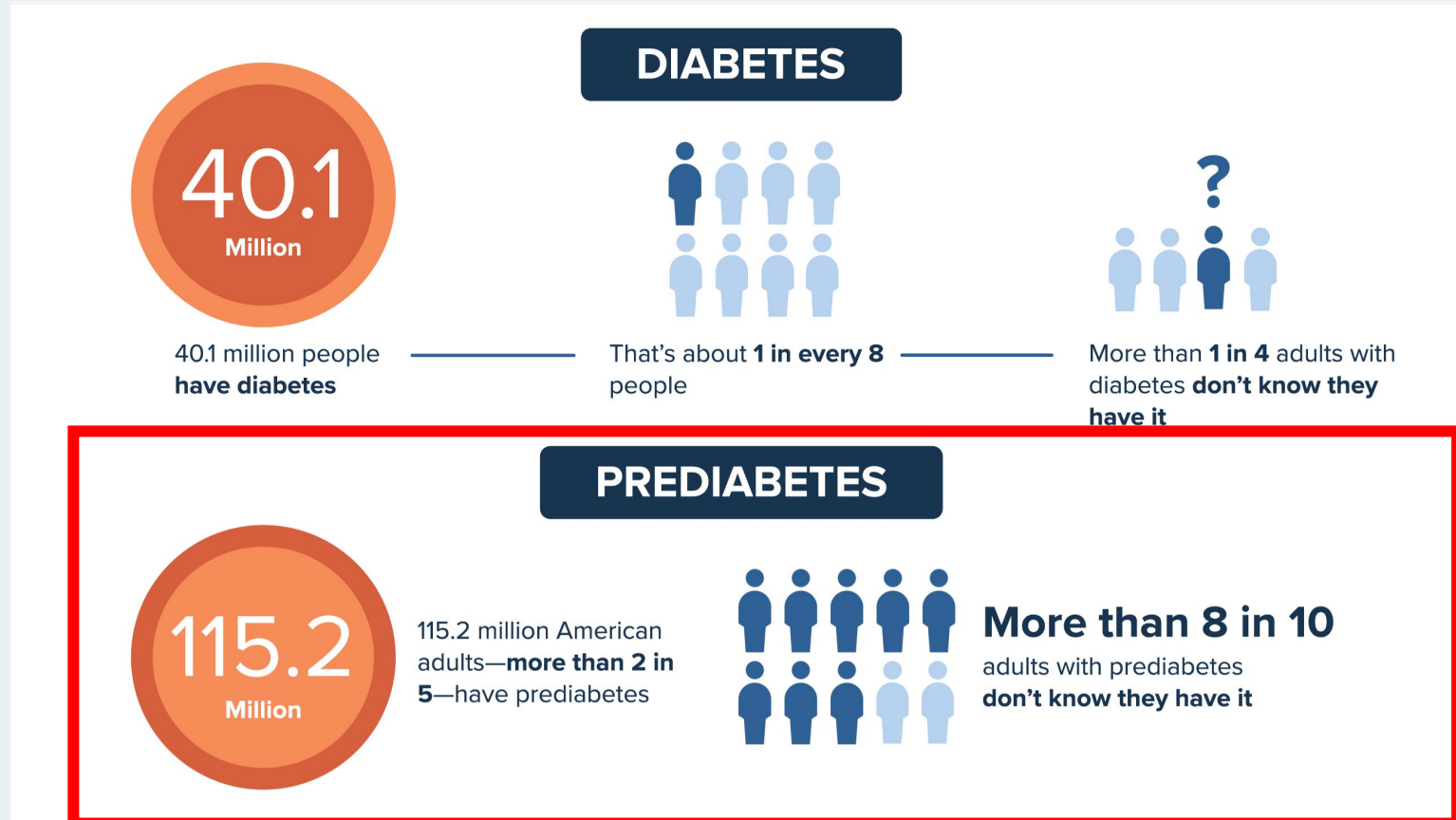
Insulin Resistance risk factors

- Increasing age (45 years or older)
- Having a parent or sibling with DM
- Cigarette smoking
- Use of certain medications, chronic glucocorticoid (steroid) use.
- Having a history of certain health conditions, PMOS or Cushing's



- HOMA-IR (Homeostatic Model Assessment for Insulin Resistance)

Centers for Disease Control and Prevention



Lifestyle Tips to Manage Insulin Resistance

- Losing excess weight
- Stopping smoking
- Minimizing sedentary behaviors
- Treating underlying sleep disturbances
- Adopting healthy stress management strategies

verywellhealth



How?



LIFESTYLE BEHAVIOR CHANGE FOR TYPE 2 DIABETES PREVENTION

Recommendations continued

3.3 **Refer adults with overweight or obesity at high risk of type 2 diabetes to a diabetes prevention program** to achieve and maintain a weight reduction of at least 5–7% of initial body weight through a healthy reduced-calorie eating pattern and ≥ 150 min/week of moderate-intensity physical activity. A

3.4 **Prescribe an evidence-based eating pattern** (e.g., Mediterranean, low carbohydrate) **to individuals with prediabetes** to prevent type 2 diabetes. B

3.5 **Offer diabetes prevention programs to adults at high risk for type 2 diabetes.** A Diabetes prevention programs should be covered by third-party payors, and inconsistencies in access should be addressed. E

3.6 Based on individual preference, certified technology-assisted diabetes prevention programs through smartphones, web-based applications, and telehealth can be effective in preventing type 2 diabetes and should be considered. B

Prediabetes often presents years to decades before T2DM

When **clinicians make patients aware** of their prediabetes the likelihood of **lifestyle change increases**.

Many physicians and healthcare providers screen with HgbA1c but **fail to document** a diagnosis of prediabetes and even fewer **refer to the Diabetes Prevention Program**





III. An opportunity to intervene

“But what do I do when I have so little time and my patient, like many rural patients, is in the ALICE population (Asset Limited Income Constrained Employed)?”



A PROVEN PROGRAM TO PREVENT OR DELAY TYPE 2 DIABETES

NDPP- National Diabetes Prevention Program

NDPP- National Diabetes Prevention Program - *Decreases risk for type 2 diabetes by 58%*

What the patient experiences:

1 year commitment, 22-26 (1 hour) sessions (in-person OR virtual)

Typically, 5-15 people in a cohort **led by a trained & certified life coach**

Curriculum is provided: Nutrition, movement, stress management, problem-solving

Focus on small, **incremental changes** leading toward **sustained lifestyle change** and health improvement in effort to prevent the occurrence of T2DM

Optional additional maintenance year... or more!

DPP – What Providers Can Do...

Screen for Eligibility:

- Participant must be **18 years or older**
- Must have **blood level in prediabetic range OR** diagnosed with **gestational diabetes** during a previous pregnancy **OR** have a positive screening for prediabetes on the **Prediabetes Risk Test**
- Must have a **BMI of >25 kg/m²** (>23 kg/m², if Asian or Asian American)
- No previous diagnosis of Type 1 or Type 2 diabetes
- Can not be pregnant at time of enrollment

And Refer!!

Prediabetes Risk Test

1. How old are you?

- Younger than 40 years (0 points)
- 40–49 years (1 point)
- 50–59 years (2 points)
- 60 years or older (3 points)

Write your score in
the boxes below

2. Are you a man or a woman?

- Man (1 point)
- Woman (0 points)

3. If you are a woman, have you ever been diagnosed with gestational diabetes?

- Yes (1 point)
- No (0 points)

4. Do you have a mother, father, sister, or brother with diabetes?

- Yes (1 point)
- No (0 points)

5. Have you ever been diagnosed with high blood pressure?

- Yes (1 point)
- No (0 points)

6. Are you physically active?

- Yes (0 points)
- No (1 point)

7. What is your weight category?

(See chart at right)

Height	Weight (lbs.)		
4'10"	119-142	143-190	191+
4'11"	124-147	148-197	198+
5'0"	128-152	153-203	204+
5'1"	132-157	158-210	211+
5'2"	136-163	164-217	218+
5'3"	141-168	169-224	225+
5'4"	145-173	174-231	232+
5'5"	150-179	180-239	240+
5'6"	155-185	186-246	247+
5'7"	159-190	191-254	255+
5'8"	164-196	197-261	262+
5'9"	169-202	203-269	270+
5'10"	174-208	209-277	278+
5'11"	179-214	215-285	286+
6'0"	184-220	221-293	294+
6'1"	189-226	227-301	302+
6'2"	194-232	233-310	311+
6'3"	200-239	240-318	319+
6'4"	205-245	246-327	328+
	1 Point	2 Points	3 Points
You weigh less than the 1 Point column (0 points)			



Potential improvements associated with percent body weight loss

- 3-5%: Hypertension, Hyperglycemia
- 5-10%: Stress urinary incontinence, **Prevention of T2DM**, PMOS, Dyslipidemia, Asthma/Airway disease, MASLD
- 10-15%: MASH, OSA, Knee OA
- $\geq 15\%$: CV disease, **T2DM remission**, CV mortality, HFpEF

Non-DPP Options for Patients

Refer to other professionals

- ✓ Registered Dietitian Nutritionist (RDN)
- ✓ Certified Diabetes Care & Education Specialist (CDCES)
- ✓ Behavioral Health Specialist
- ✓ Exercise Physiologist
- ✓ Registered Nurse (RN)
- ✓ Community Health Worker (CHW)

Encourage questions and provide thoughtful responses

Frequent follow-up - as is possible



Sample Resource



Diabetes DPG Public Library



Keys For Success with Incretin Medications

Posted By Admin User
09-10-2024 11:54 AM CT

845 756



Meal Patterns for People with Diabetes

Posted By Admin User
09-10-2024 11:57 AM CT

1047 831



Diabetes Management: A guide to choosing carbohydrates

Posted By Admin User
07-11-2023 12:55 PM CT

1288 893



Diabetes & Fiber: How fiber can help manage diabetes

Posted By Admin User
07-11-2023 12:53 PM CT

1112 852

Design your own evidence-based program



Movement (≥ 150 min/wk; Aerobic or HIIT) plus resistance/strength training



Step Up

Wearable Trackers

Sit and Be Fit- PBS

Senior Shape Fitness – YouTube



YMCA

Walk with a Doc



Mediterranean-Style Meal Pattern

Vegetarian or Vegan Meal Pattern

Low-Fat Meal Pattern/ Very Low-Fat Meal Pattern

Low CHO Meal Pattern/ Very Low-CHO Meal Pattern

DASH Meal Pattern- <1500 mg Na⁺/dy, 4-5 veg + 4-5 fruit, whole grain – low fat dairy

Portfolio Meal Pattern

Limit sweetened beverages (even artificially sweetened)

Portfolio Meal Pattern

Sample Daily Menu

Breakfast: Oatmeal made with soy milk, topped with fresh berries, ground flaxseed, and a small handful of almonds.

Morning Snack: An apple with a tablespoon of natural peanut butter.

Lunch: Lentil and vegetable soup served with a side of barley or whole-grain bread, plus a mixed green salad dressed with olive oil.

Afternoon Snack: Soy yogurt or a small portion of mixed nuts and pumpkin seeds.

Dinner: Tofu stir-fry with broccoli, snap peas, and eggplant, served over a portion of brown rice and cooked with a healthy plant oil.

Evening Snack: A small serving of walnuts or whole-grain toast with avocado.



Design your own program continued...

Behavioral Health (CBT)



Amy Walters, PhD – St. Luke's
Humphrey Diabetes Center



Earl E. Bakken Center for
Spirituality & Healing- School of
Nursing, University of Minnesota

habitnu

On-going DPP

DM101 class

Group Support

Lunch & Learn

H.E.A.R.T. – Healthy Environment for
Atherosclerotic Reduction Treatment



To quote [poet and farmer] Wendell Berry, “we’re fed by a food system that cares nothing about health and treated by a healthcare system that cares nothing about food” Earl E. Bakken Center

More suggestions to offer patients

- Food Bank/Pantry
- Senior Centers
- Respite for All Centers
- Community Health Workers
- Pharmacists
- Caregiver (could be teenager that comes after school?)
- Nurse-delivered motivational conversation and telephone follow-ups underscoring lifestyle and adherence



Meal Delivery Services

Breakthrough T1D (JDRF) – how to get help with insulin costs and other diabetes drugs and supplies.

Professional Organizations

ADA- American
Diabetes Association
(diabetes.org)

AOA- Obesity
Association
(obesityassociation.org)

CDC- Centers for
Disease Control and
Prevention (cdc.gov)

CMS- Centers for
Medicare & Medicaid
Services - Medicare
GLP1-Bridge Toolkit
(cms.gov)

DAI- Diabetes Alliance
of Idaho
(diabetesalliance.com)

DiabetesWisePro
(pro.diabeteswise.org)



Local Options for Patients- North Idaho

- ❖ PB&J Haydeners - Hayden
- ❖ Cardiovascular risk reduction clinic (GLP-1)
Kootenai Heart Clinics - CdA
- ❖ Cardiac Rehab Program - Ponderay
- ❖ Adult Exercise Class – Ponderay
- ❖ YMCA - Sandpoint
- ❖ Walk with a Doc - Sandpoint & Clark Fork
- ❖ DPP on-going support group - Sandpoint

IV. Patient Perspective & Support- ESC Germany 2026

- “We are on the same side”- invite patients in at the design stage
- The question is not, “Can we measure it?” but “**Does this information actually lead to better care?**”
- “More measurements should not mean more responsibility for the patient alone.”
- “Measure burden, trust and quality of life alongside biomarkers”
- “Next generation metabolic health should **help people live more, not manage more**”



Gil's Advice- "It's not about will-power, it's about better design"

1- Ask "What feels possible for you?"

2- One change at a time (not 7)

3- Pick a number they can control (BP?, BG?, WT? # of meals?)

4-Recruit the family/household

5- Attach a follow-up date

6- Help find movement they enjoy (walk, dance, swim)

7- Retire the word "non-compliant"

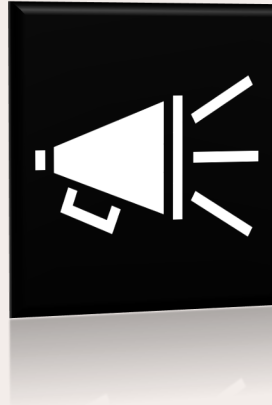
Change the words that carry the advice- the cheapest intervention- No side effects, no reimbursement forms

Words that close doors

"Non-complaint"

"You must"

"All of it, starting today"



Words that open doors

"Who cooks at home?"

"What feels possible for you?"

"Which one change do we start with?"

V. Summary/Key Points

1. Follow ADA Standards of Care in Diabetes – 2026 Guidelines
2. Remember that Lifestyle interventions are the cornerstone of treatment
3. Refer to DPP and/or other professional support staff
4. Help patients understand their diagnosis and ask, “What feels possible for you?”

References

- American Diabetes Association Professional Practice Committee for Diabetes. Classification and diagnosis of diabetes: standards of medical care in diabetes—2026. *Diabetes Care*. 2026;49(Suppl 1):S27-S49. doi:10.2337/dc23-S002
- Barrit A, Tapper E, Newsome P et al. Cardiovascular risk assessment tools are insufficient for patients with metabolic dysfunction associated steatotic liver disease. *Am J Gastroenterol*. 2025;121:710-19.
- Benraouane B, Litwin S. Reductions in cardiovascular risk after bariatric surgery. *Curr Opin Cardiol*. 2011;26(6):555-61. doi:10.1097/HCO.0b013e32834b7fc4
- Chan VWK, Gebretsadik GG, Tse MTH et al. The Portfolio diet and disease outcomes: a systematic review and meta-analysis of observational studies. *Critical Reviews in Food Science and Nutrition*. 2026;1–11. doi:10.1080/10408398.2026.2712865
- Echouffo-Tcheugui JB, Selvin E. Prediabetes and what it means: the epidemiological evidence. *Annu Rev Public Health*. 2021;42:59-77. doi:10.1146/annurev-publhealth-090419-102644.
- ESC Congress 2026- Munich, Dr. Kazuomi Kario- Japan; Kario et al. *Hypertension*. 2026;83: e26518, PMD: 42109124; Harold Sourij- Austria, Monika Kellerer- Germany, Konstantina Boumakl- Greece, Gil Meltzer, Israel
- Fryk E, Olausson J, Mossberg K et al. Hyperinsulinemia and insulin resistance in the obese may develop as part of a homeostatic response to elevated free fatty acids: A mechanistic case-control and a population-based cohort study. *eBioMedicine*. 2021; 65
- Garvey TW. New Horizons. A new paradigm for treating to target with second-generation obesity medications. *J Clin Endocrinol Metab*. 2022;107(4):e1339-1347. doi:10.1210/clinem/dgab848
- Horn D, Almandoz J, Look M. What is clinically relevant weight loss for your patients and how can it be achieved? A narrative review. *Postgrad Med*. 2022;134(4):359-375. doi:10.1080/00325481.2022.2051366
- Hostalek U. Global epidemiology of prediabetes – present and future perspectives. *Clin Diabetes Endocrinol*. 2019;5(5):1-5. doi:10.1186/s40842-019-0080-0

References continued

- Janssen J. The pivotal role of the western diet, hyperinsulinemia, ectopic fat, and diacylglycerol-mediated insulin resistance in type 2 diabetes. *International Journal of Molecular Sciences*. 2025;26(18):9191. doi:10.3390/ijms26189191
- Jean M, Leslie W, Barnes A et al. Durability of a primary care-led weight-management intervention for remission of type 2 diabetes: 2-year results of the DiRECT open-label, cluster-randomized trial. *Lancet Diabetes Endocrinol*. 2019;7(5):344-355.
- Lee J, Kim MH, Jang JY et al. Assessment HOMA as a predictor for new onset diabetes mellitus and diabetic complications in non-diabetic adults: a KoGES prospective cohort study. *Clin Diabetes Endocrinol*. 2023;9(1):7. doi:10.1186/s40842-023-00156-3
- Metwally AA, Park H, Wu Y et al. Use of Continuous Glucose Monitoring With Machine Learning to Identify Metabolic Subphenotypes and Inform Precision Lifestyle Changes. *J Diabetes Sci Technol*. 2026;20(3):673-683. doi:10.1177/19322968261431860
- Metwally AA, Perelman D, Park H et al. Prediction of metabolic subphenotypes of type 2 diabetes via continuous glucose monitoring and machine learning. *Nat Biomed Eng*. 2024;9(8):1222-1239. doi:10.1038/s41551-024-01311-6
- Moncho F, Benlloch S, Górriz JL. The impact of metabolic dysfunction-associated steatotic liver disease (MASH) on the high risk of cardiovascular disease in CKD: interconnections and management. *Clin Kidney J*. 2025;18(9):sfaf260. doi:10.1093/ckj/sfaf260
- Nadolsky K, Garvey T, Agarway M et al. American Association of Clinical Endocrinology Consensus Statement: Algorithm for the evaluation and treatment of adults with obesity/adiposity-based chronic disease – 2025 Update. *AACE Endo Practice*. 2025;31(11):1351-1394.
- SCORE2-Diabetes Working Group and the ESC cardiovascular risk collaboration. SCORE2-Diabetes: 10-year cardiovascular risk estimation in type 2 diabetes in Europe. *Eur Heart J*. 2023;44(28):2544-2556. doi:10.1093/eurheartj/ehad260
- Sundstrom J, Bruze G, Ottoson J et al. Weight Loss and Heart Failure: A Nationwide Study of Gastric Bypass Surgery Versus Intensive Lifestyle Treatment. *Circulation*. 2017;135(17):1577-1585. doi:10.1161/CIRCULATIONAHA.116.025629

References - Weblinks

<https://www.aafp.org/afp/2021/1200/p649>

<https://clindiabetesendo.biomedcentral.com/articles/10.1186/s40842-019-0080-0>

<https://diabetes.org/about-diabetes/diagnosis>

<https://www.cdc.gov/diabetes/prevention-type-2/prediabetes-prevent-type-2.html>

<https://www.mdcalc.com/calc/3120/homa-ir-homeostatic-model-assessment-insulin-resistance>

<https://diabetesallianceofidaho.org/>

<https://www.diabeteswise.org/>

<https://www.eatright.org/>

<https://www.breakthrough1d.org/>

<https://www.health.harvard.edu/heart-health/the-portfolio-diet-a-smart-investment-for-your-heart>

Thank you!

Nanci G. Jenkins, PhD, RDN, LD

Jenkins Medical Services, PLLC

208-610-6480

nancij2012@gmail.com

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