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Certifications

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Disclosures

American Diabetes Association's Primary Care Advisory Group

Review and revise the 2026 Abridged Standards of Care

ADA's Standards of Care in Diabetes 2026 Abridged version for primary care professionals

<https://diabetesjournals.org/collection/18339/2026-Abridged-Standards-of-Care>

Screening Strategies for Type 1 Diabetes in Primary Care: Action plans for Primary Care Providers (PCPs).



Recognizing Risk Factors

Identifying symptoms like excessive thirst, frequent urination, and unexplained weight loss helps detect patients at risk for type 1 diabetes.

Importance of Early Screening

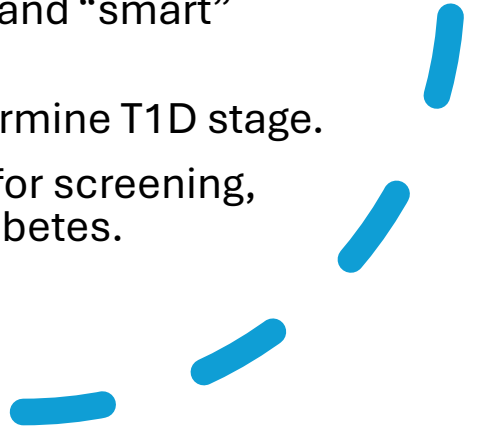
Early screening with blood glucose or HbA1c tests enables timely diagnosis and management of type 1 diabetes.

Family History and Evaluation

Awareness of family history and autoimmune markers guides further evaluation and referral to diabetes specialists.

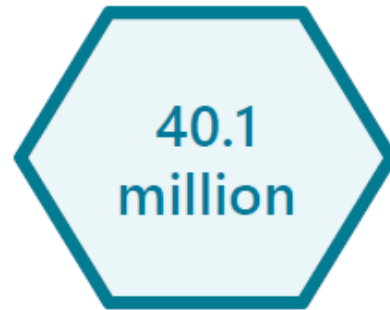
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Objectives:

- Describe the prevalence, pathophysiology, and patient burden of type 1 diabetes (T1D), including common comorbidities and clinical complications.
 - Review the current standard of care for T1D screening to achieve early recognition and diagnosis, disease staging, and informing treatment.
 - Explore current standards of care, emerging therapeutics, and the expanding role of technology and multidisciplinary collaboration in optimizing patient outcomes.
 - Recognize the role of primary care providers (PAs and NPs) in disease recognition, staging, and establishing collaborative multidisciplinary team-based care.
 - Establish referral pathways for treatment linkage and collaborative care.
 - Examine the expanding impact of technology on T1D management, emphasizing the prominence of continuous glucose monitoring (CGM), automated insulin delivery (AID) systems, and “smart” devices.
 - Evaluate laboratory data and clinical signs to determine T1D stage.
 - Review action plans for the primary care provider for screening, monitoring, treatment of and referral for type 1 diabetes.
- 

Prevalence of Diabetes

Fast Facts on Diabetes



Estimated number of people with diagnosed or undiagnosed diabetes in the United States, 2023

Total Diabetes

12.0%

Estimated percentage of the US population with diabetes

Prediabetes

115.2 million

Estimated number of US adults aged ≥ 18 years with prediabetes

Diagnosed Diabetes

29.1 million

Estimated number of people with diagnosed diabetes in the US
Including 28.8 million adults aged ≥ 18 years

Type 1 Diabetes

2.1 million

Estimated number of people with diagnosed type 1 diabetes in the US,
Including 1.8 million adults aged ≥ 20 years and 314,000 children and adolescents younger than age 20 years

Undiagnosed Diabetes

27.6%

Estimated percentage of adults aged ≥ 18 years with diabetes who are undiagnosed
Representing 11.0 million people

Prediabetes: ≥ 65 years

31.3 million

Estimated number of people aged 65 years or older (52.1%)

Epidemiology and Prevalence of T1D

Type 1 Diabetes affects approximately 1.8 million people in the US, with a significant portion undiagnosed or misdiagnosed.²

- Youths (<18 years): 3.5 cases per 1,000 people
- Adults (≥18 years): 5.3 cases per 1,000 people
- 59% of cases are in youths, 41% in adults
- **Predicted T1D prevalence is expected to increase by 46% from 2020 to 2040**
- Incidence rates are similar across age groups, with no age discrimination
- The global burden of T1D is expected to grow, emphasizing the need for improved prevention and management
- Both children and adults can present with diverse clinical features, including DKA in 30-50% at presentation

Prevalence –Primary Care Perspective

Given high rate of misdiagnosis, differential is essential

Approximately **40% of T1D cases in adults are misdiagnosed as T2D**²

- Type 1 diabetes is autoimmune beta-cell destruction.
- Total Diabetes 12.0% Estimated percentage of the US population with diabetes. Undiagnosed Diabetes 27.6%
Estimated percentage of adults aged ≥18 years with diabetes who are undiagnosed
 - *Representing 11.0 million people.*³
- **Type 1 Diabetes** 2.1 million. Estimated number of people with diagnosed type 1 diabetes in the US.³
 - *Including 1.8 million adults aged ≥20 years and 314,000 children and adolescents younger than age 20 years*
- Approximately 1.8 million diagnosed cases in the US with a large percentage undiagnosed or misdiagnosed.
- ***There is a 46% projected increase in T1 Diabetes in adults. Recognizing T1D in primary care is imperative!***
- Projections estimate a **continued rise** in T1D cases **through 2060**, especially in individuals under 20.
 - If misclassified can develop severe hyperglycemia which can place them at risk for DKA. Anyone with T1D is at risk of DKA. Rates of DKA much higher above 60% not screened vs under 10% screened and diagnosed.²

Role of Primary Care Providers in T1D Screening and Management

The primary care provider is vital in early detection, staging, referral, and ongoing management of T1D.

- PCPs (PAs and NPs) play a vital role in early disease recognition and staging.
- They can facilitate multidisciplinary referral pathways for treatment linkage.
- They manage psychosocial and social determinants impacting care.
- Over 50% of US medical visits occur in primary care, emphasizing the importance of PAs/NPs/Physicians as first-line primary care providers.
- Recognizing T1D symptoms is key such as: “3 polys” (polyphagia, polydipsia, polyuria), weakness, fatigue, weight loss.

~25-50% of T1D patients experience DKA in their lifetime

ADCES Clinical Advantage Bootcamp Type 1 Diabetes Management – Modules 1 and 7.

The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate for Nurse Practitioners. Association of Diabetes Care and Education Specialists. Module 1 and module 7.



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Role of Primary Care Physician Associates/Nurse Practitioners

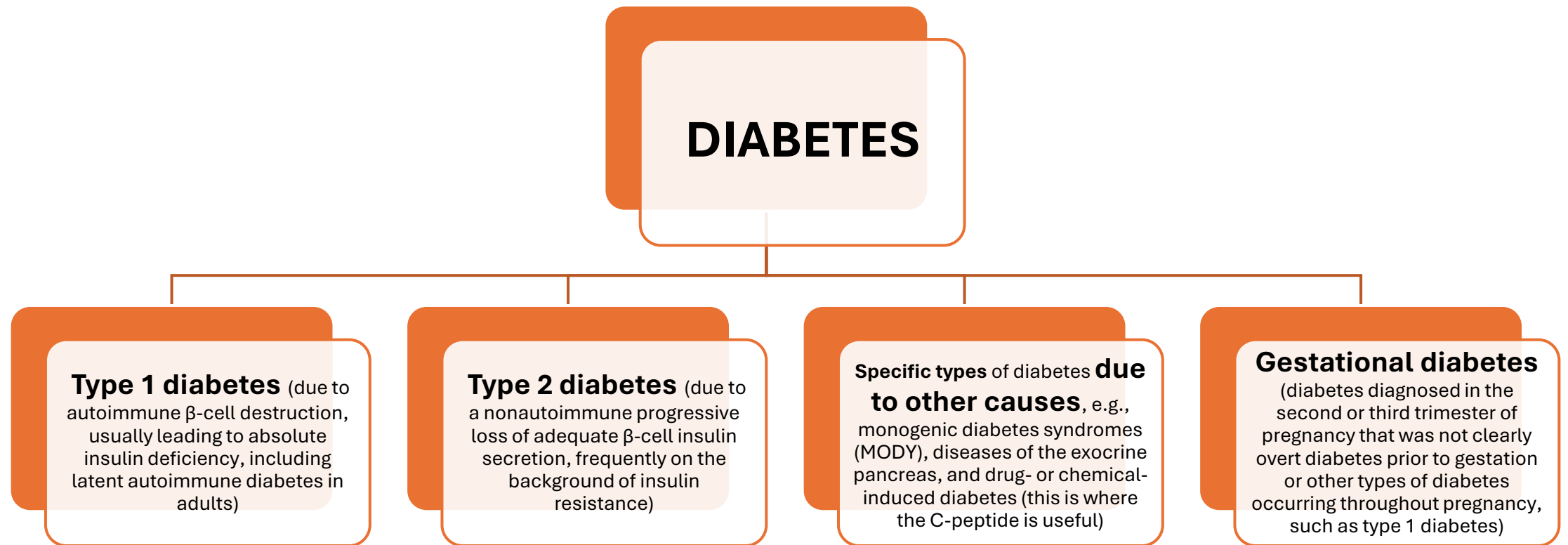
The role of primary care PA/NPs is critical in managing T1D across all stages, including screening, diagnosis, treatment, and psychosocial support.

- PAs/NPs lead screening, diagnosis, treatment, and long-term follow-up.
- Provide psychosocial support and promote health equity.
- Partner with diabetology or endocrinology and CDCES for comprehensive care.
- PA/NPs have a unique, irreplaceable role in T1D screening and management. We stand in the gap and provide access to care.

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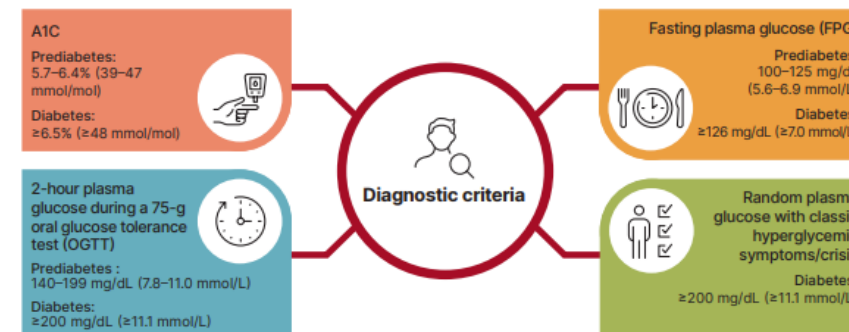
Classifying Diabetes



Section 2:

Diagnosis and Classification of Diabetes

Diagnostic Tests for Diabetes in Nonpregnant Individuals



- There is insufficient evidence to support the use of continuous glucose monitoring for screening or diagnosing prediabetes or diabetes.
- In the absence of unequivocal hyperglycemia (e.g., hyperglycemic crisis), diagnosis of type 2 diabetes requires confirmatory testing, which can be a different test on the same day or the same test on a different day.
- Marked discordance between A1C and repeated blood glucose measurements should raise the possibility of a problem or interference with either test.

Classification

Diabetes is classified conventionally into several clinical categories, although these are being reconsidered based on genetic, metabolomic, and other characteristics and pathophysiology. Classification is not always straightforward at presentation, and misdiagnosis is common.

Type 1 diabetes (autoimmune β -cell destruction or idiopathic etiology)

Gestational diabetes mellitus (GDM; detected during recommended screening at 24–28 weeks of gestation or any time in the second or third trimester of pregnancy in individuals without previously identified diabetes or high-risk glucose metabolism)



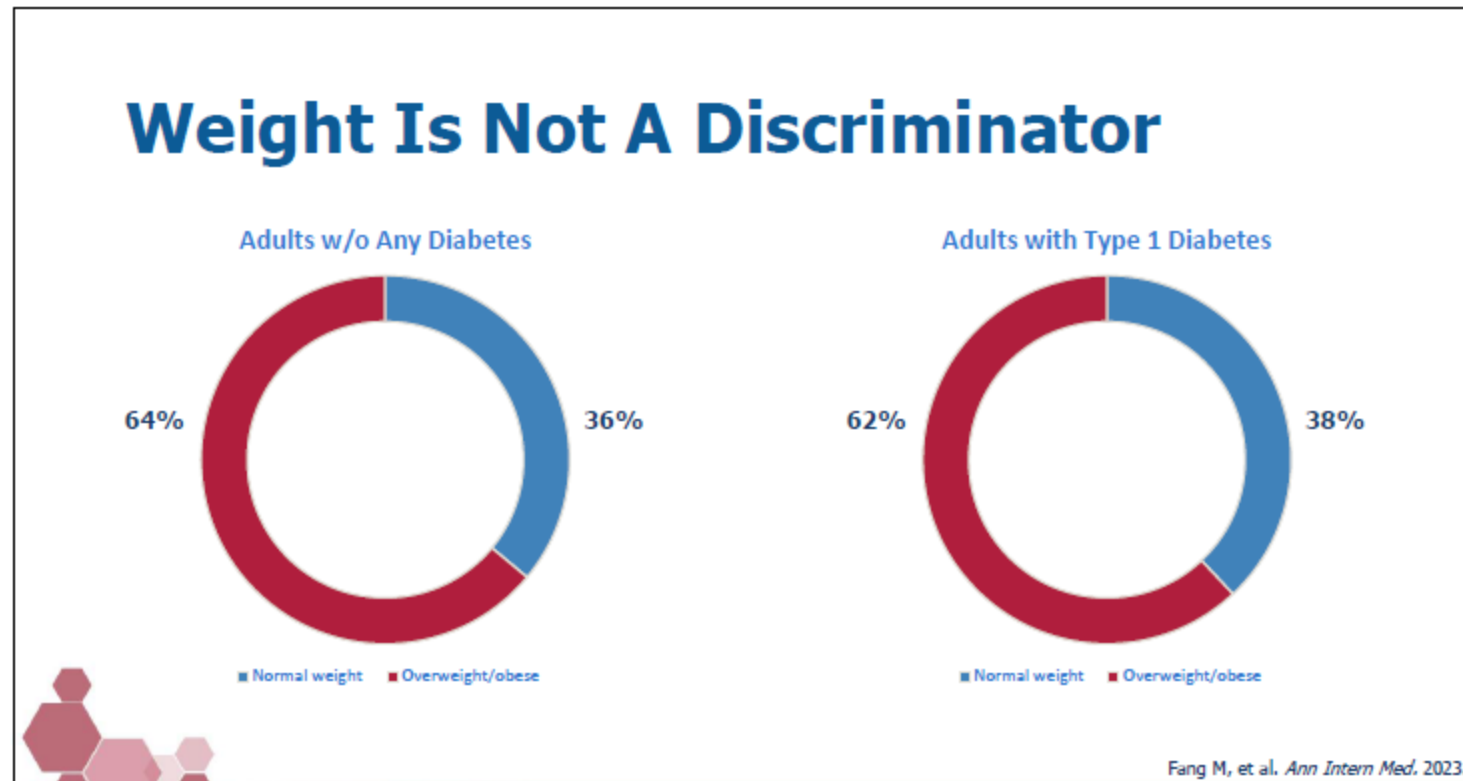
Type 2 diabetes (nonautoimmune progressive loss of adequate β -cell insulin secretion frequently on the background of insulin resistance)

Diabetes from other causes (e.g., monogenic diabetes syndromes, diseases of the exocrine pancreas, and drug- or chemical-induced diabetes)

Suggested citation: American Diabetes Association Primary Care Advisory Group. 2. Diagnosis and classification of diabetes: Standards of Care in Diabetes—2026 abridged for primary care professionals. Diabetes Obes Cardiometab CARE 2026. Published online ahead of print 23 March 2026 (doi: 10.2337/doc26-a002). © 2026 by the American Diabetes Association.

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- **WEIGHT** is not a discriminator. People with T1D are of same weight as those who are overweight/obese with insulin resistance.



AGE is not a discriminator. There is a projected 46% INCREASE BY 2040 of T1D prevalence by AGE from age 29-69.

- Initially T1D was thought to be more common in children. However, there is a dramatic increase in adults being diagnosed with T1D. Trends can peak by age 11 then drops by age 14. However, peaks again at age 50 uptick until 60s. Usually this is LADA.

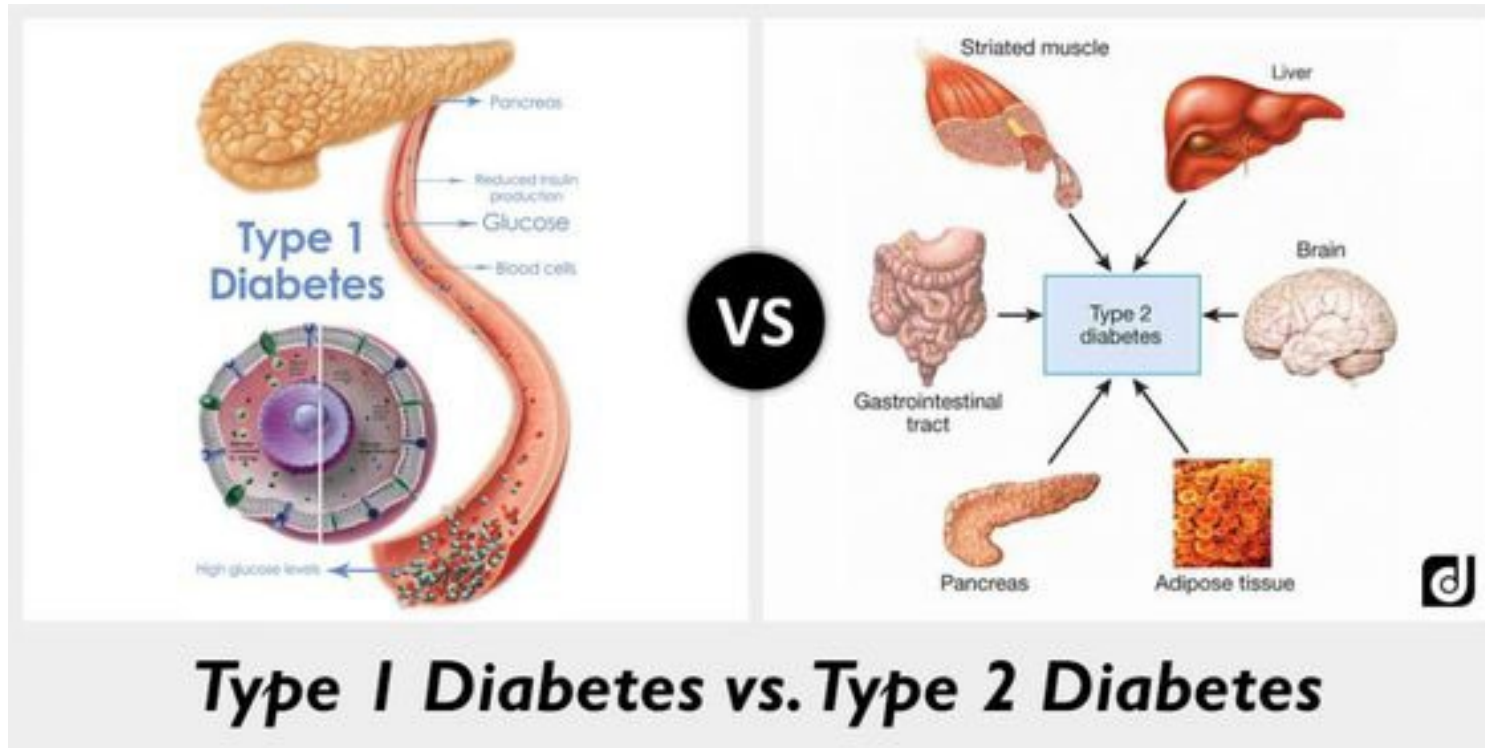
40% of T1D cases in adults are misdiagnosed as T2D!!!

Pathogenesis, Staging, and Disease Progression²

T1D develops through genetic and immune mechanisms, progressing from susceptibility to clinical disease.

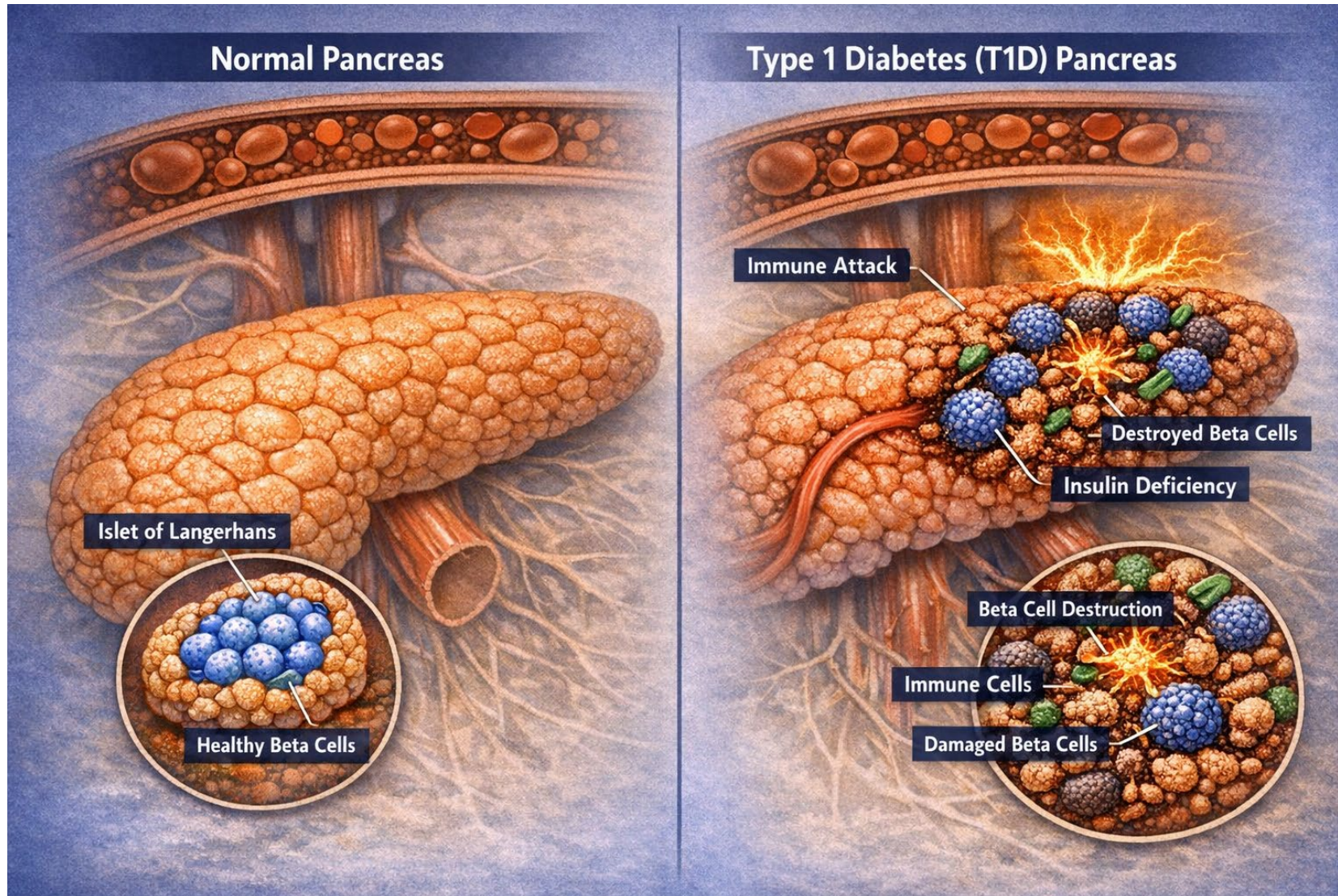
- Stages 1-3: from autoantibody presence to overt hyperglycemia²
- **≥2 autoantibodies** indicate increased risk
- Progression from Stage 1 to Stage 3: approximately 44% in 5 years, 70% in 10 years, nearly 100% lifetime risk²
- Autoimmune response triggers beta-cell destruction, leading to insulin deficiency. Beta cell no longer produces insulin.
- **Early detection can delay progression and preserve insulin production**

Pathophysiology of T1D

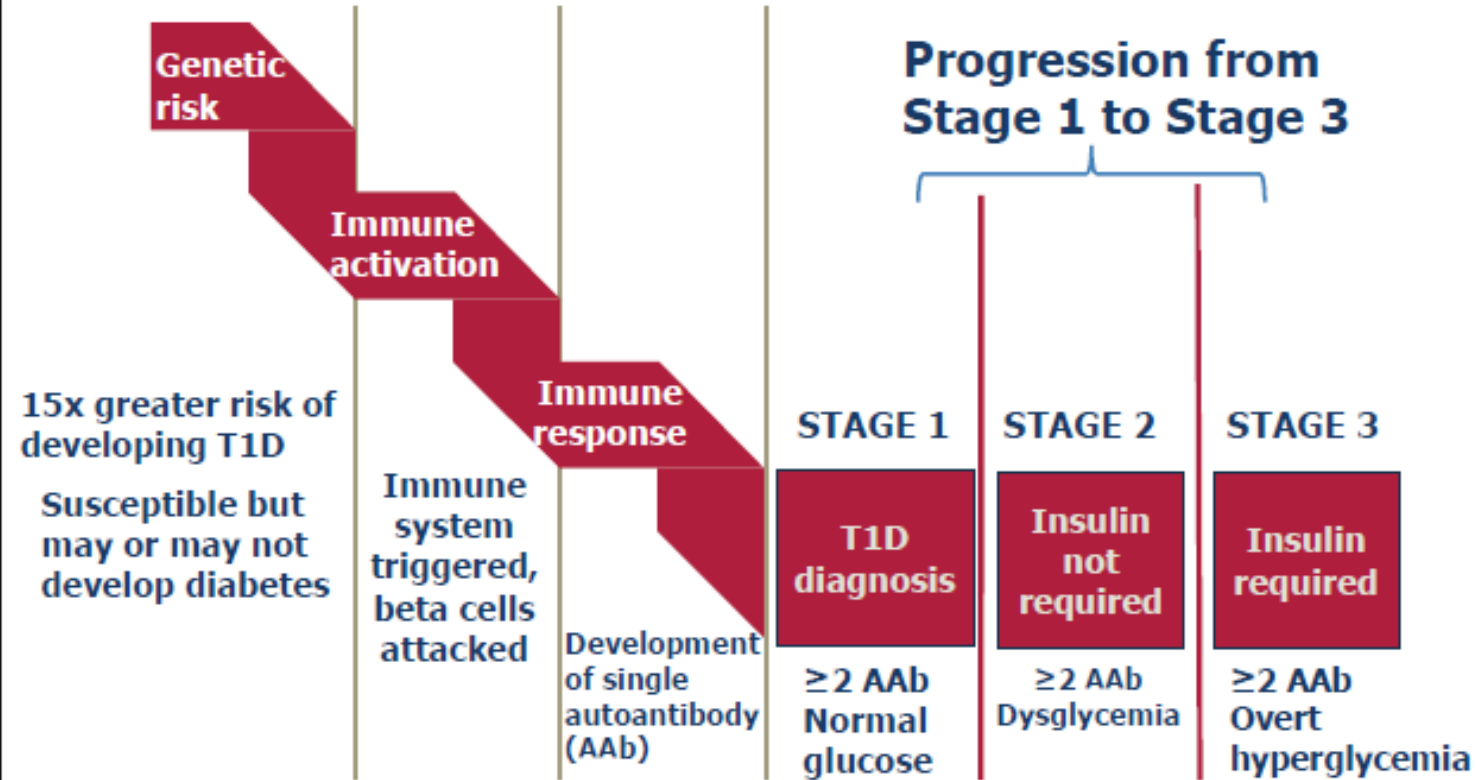


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Pathophysiology – Immune Activation



The Pathogenesis and Progression of T1D



Adapted from DiMeglio LA, et al. *Lancet*. 2018 Insel RA, et al. *Diabetes Care*. 2015; Sims EK, et al. *Diabetes*. 2022; 2025 ADA Standards of Care. Diagnosis and Classification of Diabetes.

Identify genetic risk



FH of autoimmune disorders

Autoimmune arthritis

Autoimmune thyroid disease – if positive for T1D recommendation is to also screen for autoimmune thyroid disease

Celiac disease

Type 1 diabetes



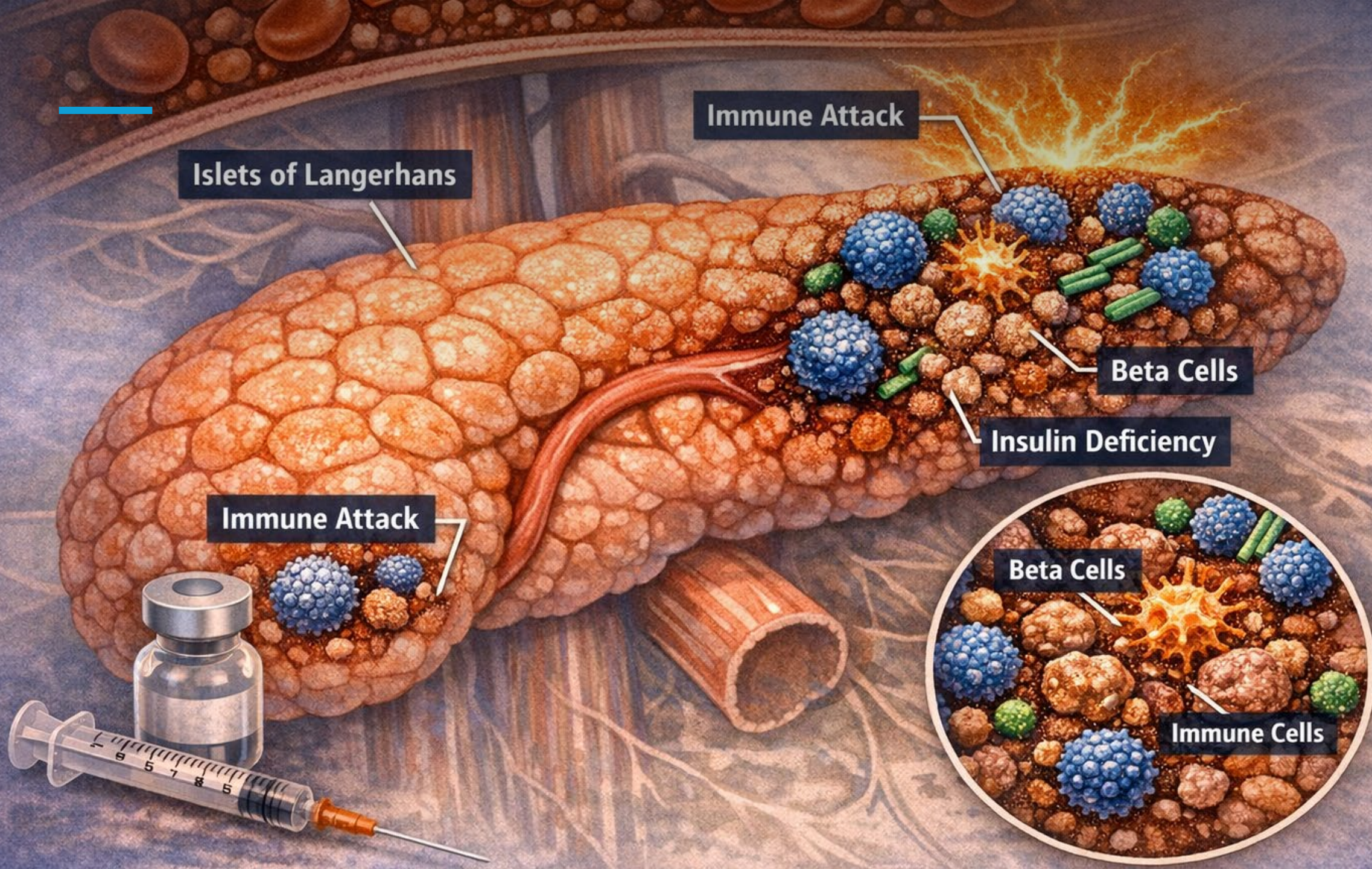
The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate. Association of Diabetes Care and Education Specialists. Module 1.

Immune system

Immune system gets triggered

- **Viruses**- Certain viruses have been associated with type 1 diabetes:
 - Enteroviruses (e.g., Coxsackievirus B).
- **Precipitating factors:**
 - Acute illness
 - Disruption of insulin
 - New medication (potentially causative new medications like SGLT2s).

American Diabetes Association Professional Practice Committee for Diabetes*; 2. Diagnosis and Classification of Diabetes: Standards of Care in Diabetes—2026. Diabetes Care 1 January 2026; 49 (Supplement_1): S27–S49. <https://doi.org/10.2337/dc26-S002>



Clinical Presentation and Diagnosis

T1D presents with classic symptoms like **polyuria, polydipsia, polyphagia (3 P's)**, weight loss, fatigue, and weakness.

- Acute presentation often includes DKA in 30-50% of cases
- Diagnosis relies on hyperglycemia, autoantibodies, and clinical features
- In adults, **misdiagnosis as T2D is common (~40%)**, emphasizing the importance of differential diagnosis

A Diverse Clinical Presentation

People at any age can be diagnosed with T1D and needs to be on our radar no matter the age of someone.

- **Childhood/Adolescence**
 - Typical acute presentation of signs and symptoms
 - 3 p's (polyuria, polydipsia and polyphasia)
 - Weight loss
 - 30-50% present with DKA
- **Adulthood (Latent Autoimmune Diabetes in Adulthood-LADA)**
 - Autoimmune process is slower in adults then in children - smoldering
 - Variable presentation
 - Eventually will develop the 3 p's and weight loss
 - Lower rates of DKA

The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate. Association of Diabetes Care and Education Specialists. Module 1.



Clinical significance

Primary Care

- Focus more often is on type 2 diabetes and metabolic epidemic.
HOWEVER
- T1D is frequently *underrecognized* and *underdiagnosed*
YET it is associated with:
 - More serious micro and macrovascular complications than T2d
 - Has a greater impact on mortality
 - 25-50% PWT1D experience life-threatening DKA and hypoglycemia

Diabetic Ketoacidosis

Recognizing T1D in primary care. If misclassified, can develop severe hyperglycemia which can place them at risk for DKA. Anyone with T1D is at risk of DKA.

- Viral illnesses can precipitate DKA
- **Ketosis** – urine ketones urine ketone 2+ or ketones in blood (Beta-hydroxybutyrate) blood glucose >250mg/dL, arterial pH<7.3 and bicarbonate <18 mmol/L , anion gap >12
- 25-50% with T1D will experience DKA in their lifetime. Number one cause is infection.
 - Education is crucial – That is why referral to a CDCES is recommended. Need comprehensive education on insulin administration, sick day rules, hydration, monitoring during acute illness and activity, hypo and hyperglycemia treatment, etc.



Causes of DKA



Acute illness/infection/dehydration



Disruption of insulin (kinked tubing on insulin pump or infusion site gets disconnected, not giving insulin, etc.).



New medication (potentially causative new medications like SGLT2s). Risk is highest during first month of treatment

Risk of developing euglycemic DKA

Euglycemic DKA

- Per ADA 2026 Standards of Care approximately 10% of DKA cases present as euglycemic DKA (plasma glucose 200 mg/dL) in the presence of low insulin levels, which can be associated with reduced food intake (starvation ketosis), pregnancy, alcohol use, liver failure, and/or SGLT2 inhibitor therapy.

OpenEvidence Accessed on 05/26/26 and

American Diabetes Association Professional Practice Committee for Diabetes*. 16. Diabetes Care in the Hospital: Standards of Care in Diabetes-2026. Diabetes Care. 2026 Jan 1;49(Supplement_1):S339-S355. doi: 10.2337/dc26-S016. PMID: 41358892; PMCID: PMC12690180.

Standard of Care for Type 1 diabetes screening

- Goal is to achieve early recognition and diagnosis, disease staging, and treatment.
- **Remember - 40% of T1D cases in adults are misdiagnosed as T2D!!!**
- *If something doesn't quite add up then re-evaluate your diagnosis and screen for T1D.*



Autoantibodies and Screening Strategies

Autoantibody presence confirms autoimmunity and increases T1D risk.

- Key autoantibodies: **GAD-65** (65-75% sensitivity, 99% specificity), **IA-2** (50-90%), **insulin autoantibodies** (74%), **Zinc transporter 8** (65-75%) – Screen for ALL 4!
- Screening is recommended for all ages, especially those with family history or phenotypic risk factors
- Differentiating T1D from T2D involves autoantibody testing, age, C-peptide levels, and symptoms
- Early detection through islet autoantibodies can prevent DKA and reduce insulin dependence at diagnosis ²

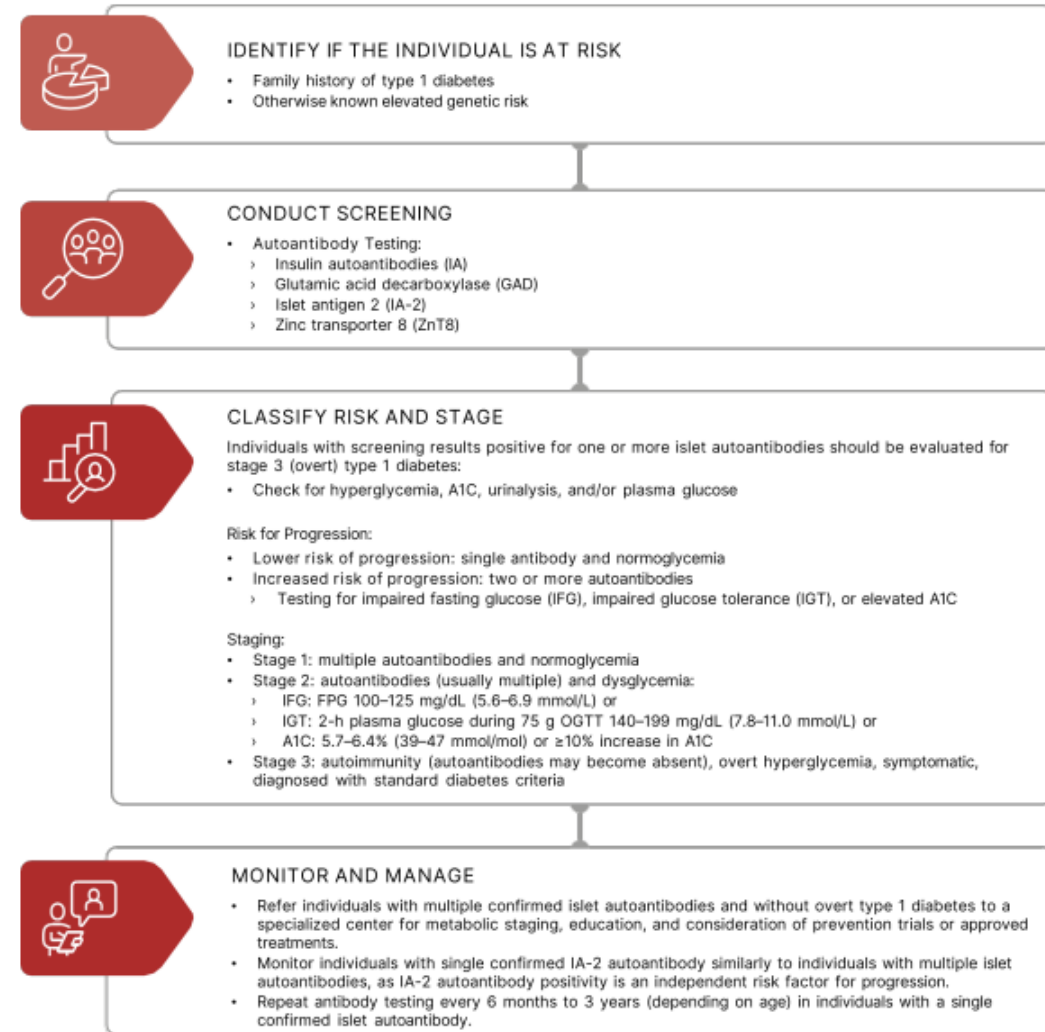
ADA Standards of Care 2026 – Type 1 Diabetes Recommendations

Recommendations

- “**2.6** Screen for presymptomatic type 1 diabetes by **testing autoantibodies** against insulin (IA), glutamic acid decarboxylase (GAD), islet antigen 2 (IA-2), or zinc transporter 8 (ZnT8). **B**
- **2.7** Autoantibody-based screening for presymptomatic type 1 diabetes should be offered to those with a **family history of type 1 diabetes or otherwise known elevated genetic risk**. **B**
- **2.8a** Individuals with screening **results positive for one or more islet autoantibodies** should be **evaluated for stage 3 (overt) type 1 diabetes** (using A1C, urinalysis, and/or plasma glucose), which would require prompt clinical management and education. **B**
- **2.8b** Individuals with **multiple confirmed islet autoantibodies** and **without overt type 1 diabetes** have a **high risk for progression** to stage 3 type 1 diabetes and should be referred to a specialized center for metabolic staging (**Table 2.4**), education, and consideration of prevention trials or approved treatments (e.g., teplizumab). **B**
- **2.9** Individuals with a **single confirmed IA-2 autoantibody** should be **monitored similarly** to individuals with multiple islet autoantibodies, as **IA-2 autoantibody positivity** is an **independent risk factor for progression**. **B** Individuals with a **single confirmed islet autoantibody** should undergo **repeat antibody testing every 6 months to 3 years** (depending on age) to assess for persistence or seroconversion. **E**
- **2.10** Standardized islet autoantibody tests are recommended for classification of diabetes in adults who have **phenotypic** risk factors that overlap with those for type 1 diabetes (e.g., younger age at diagnosis, unintentional weight loss, ketoacidosis, or short time to insulin treatment). **E”**

<https://diabetesjournals.org/collection/18339/2026-Abridged-Standards-of-Care>

Screening for and Staging Type 1 Diabetes:



Conduct screening – Islet Autoantibodies

Differentiating T1D from T2D involves autoantibody testing, age, C-peptide levels, and symptoms.

Islet Autoantibody presence confirms autoimmunity and increases T1D risk.

Key **4 autoantibodies**:

- Glutamic acid decarboxylase **GAD-65** (65-75% sensitivity, 99% specificity)
- Islet Antigen -2 **IA-2** (50-90%)
- Insulin autoantibodies - **IA** (74%)
- Zinc transporter 8 **Znt8**(65-75%)

Screening is recommended for **all ages**, especially those with family history or phenotypic risk factors

- Early detection through islet autoantibodies can **prevent DKA** and **reduce insulin dependence** at diagnosis

C-peptide:

- The pancreas's capacity to make insulin
- Combine with fasting blood glucose

Hemoglobin A1C

Screening

Autoantibody Screening Options

Research-based Screening – It is FREE but must have a family history

- TrialNet – most common
- PLEDGE
- CASCADE
- ASK - ASK: Autoimmunity Screening for Kids

Commercial Laboratories

- Quest Diagnostics - test code **13621**, Diabetes Type 1 Autoantibody Panel
- LabCorp – test code **504050**, Diabetes Autoimmune Profile

Breakthrough T1D

Resource for questions about screening

<https://www.breakthrough1d.org/early-detection/#screening-options>
Accessed 10/12/26

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What are the benefits of early detection?

Early detection can help identify T1D before symptoms occur so that you and your healthcare team can develop a monitoring plan.

Early detection of type 1 diabetes has many proven benefits, including:

- Reducing the risk of [diabetic ketoacidosis \(DKA\)](#) at diagnosis of stage 3 type 1 diabetes
- Introducing individuals with early stage T1D to research or clinical trials aimed at delaying/preventing the onset of stage 3 T1D
- Connecting individuals with early stage T1D to specialists for follow up and options for FDA-approved therapies to slow disease progression and delay the need for insulin.
- Giving families time to plan and prepare

What are your screening options?

Try our screening decision tool.

Screening Decision Tool

Do you have a family member with T1D?

[Yes](#)[No Or I'm Not Sure](#)

Benefits of Early Detection and Early Screening:

- Early T1D autoantibody screening can reduce the risk of diabetic ketoacidosis (DKA) at diagnosis.¹
- Early detection **enables intervention** with approved therapies, such as **teplizumab**, that can **delay progression** to stage 3 T1D.¹
- Screening offers **opportunities to access disease-modifying therapy** trials and prepare for future health needs.¹
- Early detection has supported **therapy development and research** aimed at **delaying, stopping, or reversing the immune attack underlying T1D**.¹

1. Breakthrough T1D. Breakthrough T1D-convened paper outlines first international consensus guidance on general population screening for early-stage type 1 diabetes. Published September 10, 2026. Accessed October 15, 2026. <https://www.breakthrought1d.org/for-the-media/press-releases/breakthrough-t1d-convened-paper-outlines-first-international-consensus-guidance-on-general-population-screening-for-early-stage-type-1-diabetes/>

New International Consensus Statement

The 2026 international consensus guidance, developed by nearly 30 experts and published in *Diabetologia*, provides a framework for general-population type 1 diabetes (T1D) screening: who to screen, when, and how often.¹

- Blood testing for islet autoantibodies can detect T1D before symptoms or insulin therapy are needed; two or more persistent autoantibodies indicate stage 1 or 2 T1D and a high likelihood of progression to clinical stage 3.¹
- Begin screening at ages 2–4 years; rescreen children with negative results at ages 6–8 and 10–15 years, aligned with preventive healthcare visits.¹
- Confirm initial screening results with a second test before diagnosis.¹
- The screening framework complements the [2024 consensus monitoring guidance](#), providing an integrated approach to T1D screening and monitoring.¹

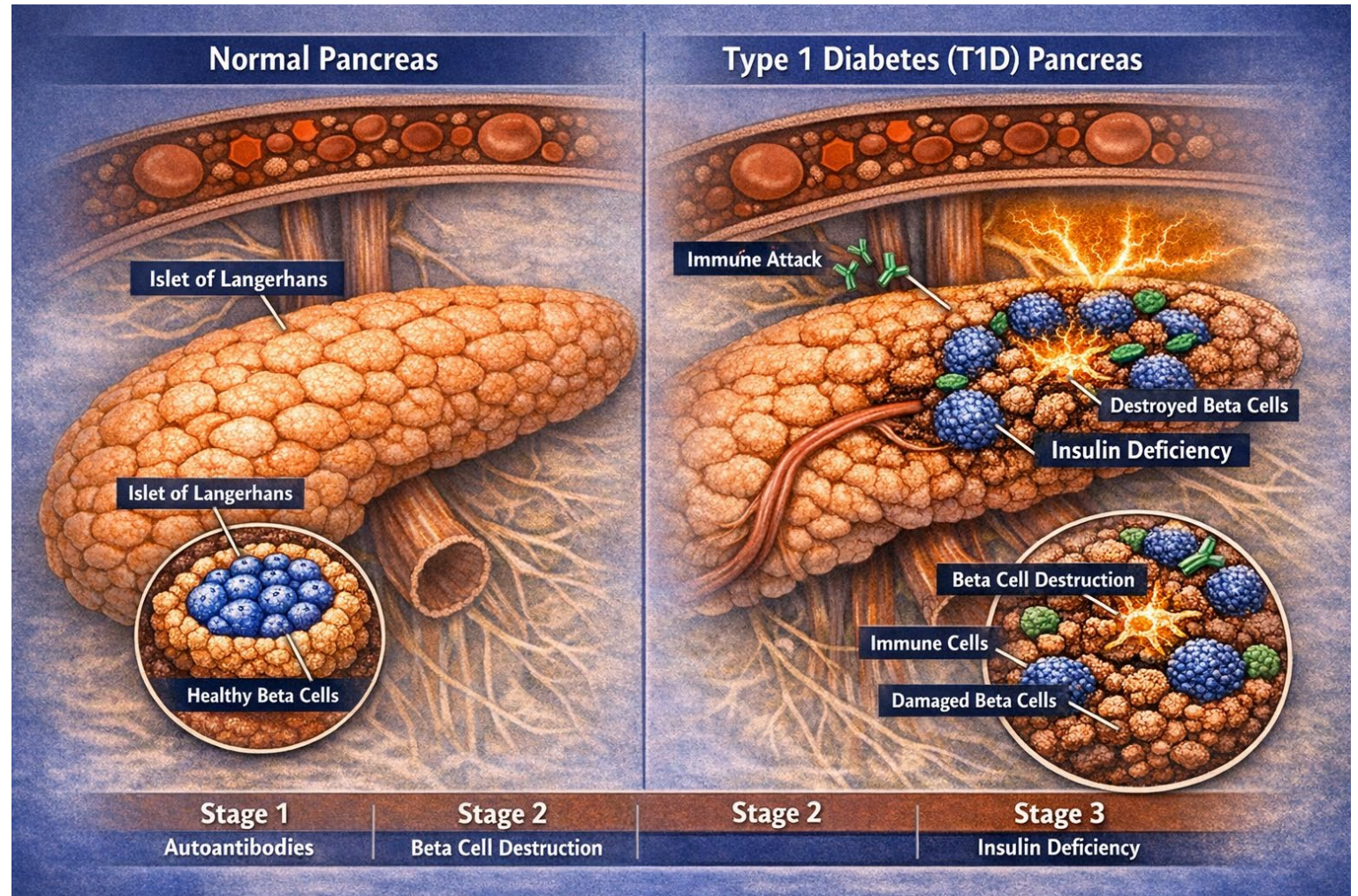
1. Breakthrough T1D. Breakthrough T1D-convened paper outlines first international consensus guidance on general population screening for early-stage type 1 diabetes. Published September 10, 2026. Accessed October 15, 2026. <https://www.breakthrought1d.org/for-the-media/press-releases/breakthrough-t1d-convened-paper-outlines-first-international-consensus-guidance-on-general-population-screening-for-early-stage-type-1-diabetes/>

Type 1 Diabetes staging

Action plan for PCPs!



Staging of Type 1 Diabetes



Stage 1

Stage 1 – Autoimmunity (Asymptomatic)

- Presence of **multiple islet autoantibodies $\geq$ 2 or more**
- **Normoglycemia**
 - **No IGT or IFG, normal A1C**
- Asymptomatic/Presymptomatic
- Structurally intact islets and beta cells
(Shown transitioning from normal pancreas with emerging immune markers)

American Diabetes Association Professional Practice Committee for Diabetes*; 2. Diagnosis and Classification of Diabetes: Standards of Care in Diabetes—2026. Diabetes Care 1 January 2026; 49 (Supplement_1): S27–S49. <https://doi.org/10.2337/dc26-S002>



Stage 1 – Autoimmunity, Normoglycemia

Multiple islet autoantibodies are present with normal glycemia, representing presymptomatic type 1 diabetes.

Key labs

- Islet autoantibodies: **GAD65, IA-2, ZnT8, IAA**

Recommended PCP actions:

- **Screen** at-risk individuals (family history of T1D or autoimmune disease) with **islet autoantibody testing**
- **Educate** patient/family on risk of progression and symptoms of hyperglycemia and DKA – Refer for DSMES with a CDCES
- **Refer** to diabetology/endocrinology or structured T1D screening/monitoring program
- **Plan monitoring** of glycemia per specialty guidance

Stage 2

Stage 2 – Dysglycemia

- Ongoing **immune-mediated beta-cell destruction (Autoimmunity)**
- **Islet Autoantibodies (usually multiple) ≥ 2**
- Impaired glucose regulation
Dysglycemia:
 - * IFG: FPG 100–125 mg/dL
(5.6–6.9 mmol/L) or
 - * IGT: 2-h PG 140–199 mg/dL
(7.8–11.0 mmol/L) or
 - * A1C 5.7–6.4% (39–47 mmol/mol)
or $\geq 10\%$ increase in A1C
- Still **asymptomatic/Presymptomatic**
(*Shown as visible immune infiltration and beta-cell injury*)
- Insulin is not required

American Diabetes Association Professional Practice Committee for Diabetes*; 2. Diagnosis and Classification of Diabetes: Standards of Care in Diabetes—2026. *Diabetes Care* 1 January 2026; 49 (Supplement_1): S27–S49. <https://doi.org/10.2337/dc26-S002>

Stage 2 – Autoimmunity, Dysglycemia

Ongoing autoimmune beta-cell destruction leads to abnormal glucose levels without clinical symptoms.

Key labs:

- Multiple islet autoantibodies (**GAD65, IA-2, ZnT8, IAA**)
- **Dysglycemia** (IFG, IGT, rising A1C below diabetes threshold) add lab values

Recommended PCP actions:

- **Monitor closely** with periodic glucose/A1C testing and symptom review
- **Refer (if not already)** to Diabetology/endocrinology for staging confirmation and care coordination
- **Discuss disease progression** and DKA prevention strategies
- **Consider eligibility discussion** for FDA-approved disease-modifying therapy (per endocrinology) – Teplizumab or Donislecel

Teplizumab

- **Teplizumab** is an FDA-approved option to delay progression from stage 2 to stage 3 T1D in adults and children aged 8 years and older with dysglycemia and two or more positive islet autoantibodies.
 - Delays progression for up to two to four years
- It is an anti CD3 monoclonal antibody directed at T cells and is administered by intravenous infusion once daily for 14 consecutive days. ^{2,3,21,22}
- Clinical trial data showed a clinically meaningful delay in progression to stage 3 disease. ^{2,3,21,22}
- Primary care clinicians should identify Stage 2 patients through islet autoantibody screening and dysglycemia assessment and refer eligible individuals to endocrinology/diabetology for evaluation and shared decision-making regarding disease modifying therapy. ^{2,3,7}

Now approved for stage 3 T1D!

Recently FDA approved for early stage 3 type 1 diabetes!

- Children and adolescents ages 8-17 recently diagnosed with Stage 3 T1D within the **last 8 weeks**.
- Adults stage 2 T1D

Now indicated for both stage 2 and stage 3 type 1 diabetes.

HISTORIC MILESTONE

FDA APPROVES **FIRST** DISEASE-MODIFYING THERAPY FOR STAGE 3 TYPE 1 DIABETES

FDA APPROVED

JUNE 13, 2026

THE T1D JOURNEY

STAGE 2 T1D
Autoimmune attack is happening. Blood sugar levels are abnormal (dysglycemia). No symptoms.

STAGE 3 T1D
Clinical diagnosis. Rising blood sugar reaches the point of diabetes. Symptoms begin.

TZIELD®
(teplizumab)
First FDA-approved disease-modifying therapy for Stage 3 T1D.

SLOWER β-CELL DECLINE
Preserving beta-cell function to help improve outcomes and quality of life.

TZIELD®

(teplizumab)

FIRST FDA-APPROVED DISEASE-MODIFYING THERAPY FOR STAGE 3 T1D

APPROVED FOR
Children and adolescents aged 8–17 years recently diagnosed with Stage 3 T1D.

EVIDENCE BEHIND APPROVAL

PROTECT PHASE 3 TRIAL

- ✓ 328 participants (8–17 years old)
- ✓ 12-day infusion course × 2
- ✓ Significantly slowed C-peptide decline vs placebo (p<0.001)
- ✓ Well tolerated; safety profile consistent with prior studies

Over 900 patients have received TZIELD across the global clinical development program.

WHY IT MATTERS

TZIELD PRESERVES BETA-CELL FUNCTION, WHICH HAS BEEN SHOWN TO RESULT IN:

- Lower insulin requirements
- Better HbA1c
- Fewer hypoglycemic events
- Reduced burden of care
- Potentially improved long-term outcomes

A NEW ERA IN T1D

BEFORE

Insulin replacement only

NOW

Insulin + disease-modifying therapy

ACCELERATED APPROVAL
Granted through the accelerated approval pathway.

CHANGING THE COURSE OF TYPE 1 DIABETES
Working toward a future where everyone with T1D can live healthier, longer lives.

OVER 30 YEARS OF SUPPORT
Breakthrough T1D and the T1D Fund have supported the development of this therapy for over 30 years.

THANK YOU
We thank the FDA, Sanofi, and the T1D community for advocating for therapies that change the course of this disease.

With gratitude and hope,
Dr. Wafaa Laimon

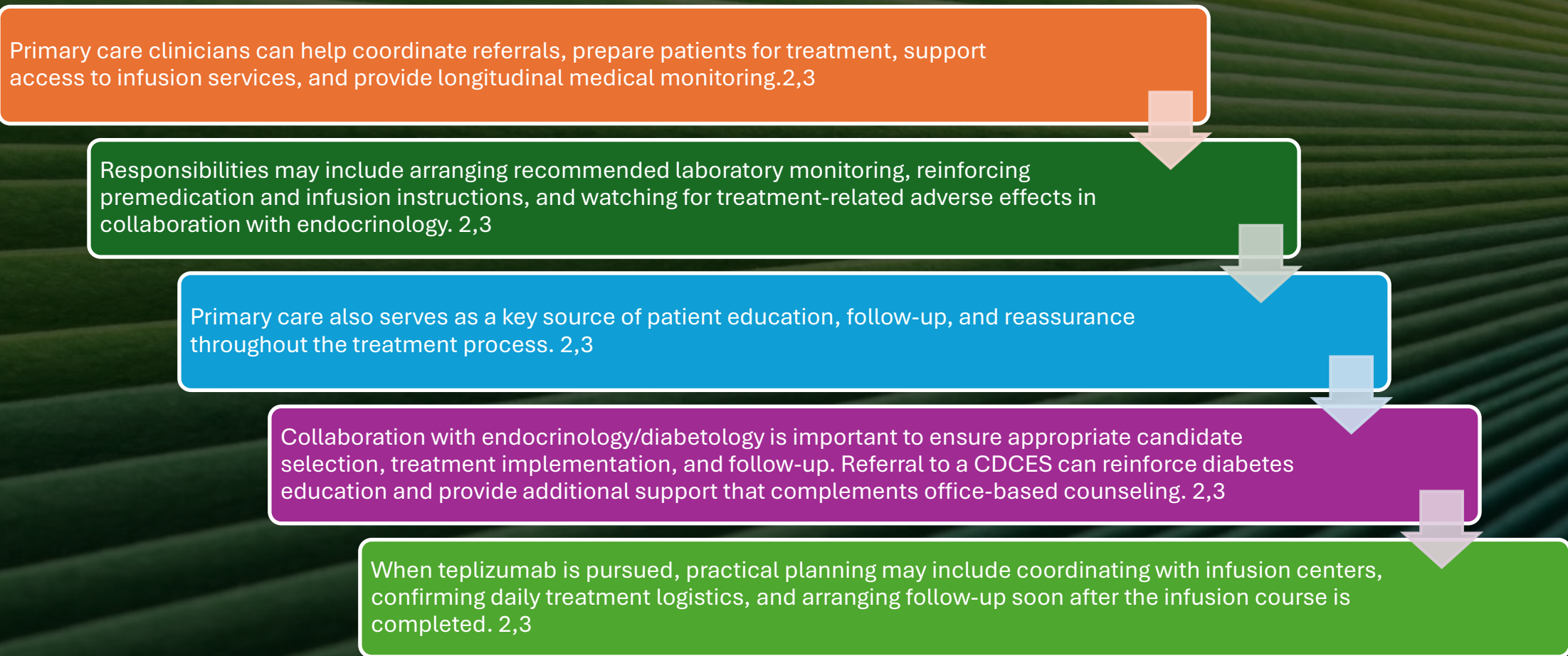
Breakthrough T1D™
Formerly JDRF

T1D FUND

Together, we will continue to fight for access to therapies that transform lives for people with T1D everywhere.

Primary care responsibilities in teplizumab-based care

Primary care clinicians can help coordinate referrals, prepare patients for treatment, support access to infusion services, and provide longitudinal medical monitoring.^{2,3}



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graph TD; A[Primary care clinicians can help coordinate referrals, prepare patients for treatment, support access to infusion services, and provide longitudinal medical monitoring. 2,3] --> B[Responsibilities may include arranging recommended laboratory monitoring, reinforcing premedication and infusion instructions, and watching for treatment-related adverse effects in collaboration with endocrinology. 2,3]; B --> C[Primary care also serves as a key source of patient education, follow-up, and reassurance throughout the treatment process. 2,3]; C --> D[Collaboration with endocrinology/diabetology is important to ensure appropriate candidate selection, treatment implementation, and follow-up. Referral to a CDCES can reinforce diabetes education and provide additional support that complements office-based counseling. 2,3]; D --> E[When teplizumab is pursued, practical planning may include coordinating with infusion centers, confirming daily treatment logistics, and arranging follow-up soon after the infusion course is completed. 2,3];
```

Responsibilities may include arranging recommended laboratory monitoring, reinforcing premedication and infusion instructions, and watching for treatment-related adverse effects in collaboration with endocrinology. ^{2,3}

Primary care also serves as a key source of patient education, follow-up, and reassurance throughout the treatment process. ^{2,3}

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When teplizumab is pursued, practical planning may include coordinating with infusion centers, confirming daily treatment logistics, and arranging follow-up soon after the infusion course is completed. ^{2,3}

Donislecel

- Donislecel is an FDA-approved option for selected adults with T1D who are unable to approach target glycemic goals because of repeated episodes of severe hypoglycemia despite intensive diabetes management and education. It is an allogeneic donor islet cell therapy/donor beta cell transplant and requires ongoing immunosuppression, so patient selection is highly specialized

ADCES Clinical Advantage Bootcamp Type 1 Diabetes Management – Modules 1 and 7.

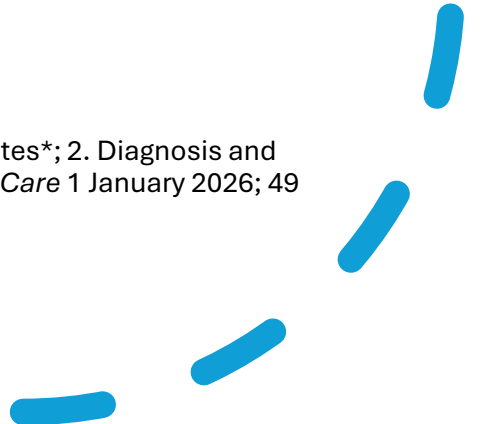
The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate for Nurse Practitioners. Association of Diabetes Care and Education Specialists. Module 1 and module 7.

Stage 3

Stage 3 – Clinical Type 1 Diabetes

- **Significant beta-cell loss (Autoimmunity)**
 - Autoantibodies may become absent
- **Insulin deficiency/Overt hyperglycemia**
 - Meets standard diabetes criteria
- Symptomatic hyperglycemia ± DKA
(Shown as destroyed beta cells and absent insulin signaling)
- **Insulin is required**

American Diabetes Association Professional Practice Committee for Diabetes*; 2. Diagnosis and Classification of Diabetes: Standards of Care in Diabetes—2026. *Diabetes Care* 1 January 2026; 49 (Supplement_1): S27–S49. <https://doi.org/10.2337/dc26-S002>



Stage 3 – Clinical Type 1 Diabetes

Advanced beta-cell loss results in overt hyperglycemia with symptoms, requiring lifelong insulin therapy.

Key features:

- May or may not have detectable autoantibodies at diagnosis
- Meets **standard diagnostic criteria for diabetes**

Recommended PCP actions:

- **Initiate urgent referral** to diabetology or endocrinology (or same-day management if symptomatic)
- **Assess for DKA** and send to ED if indicated
- **Start insulin promptly** (or ensure immediate specialist initiation)
- **Coordinate diabetes self-management support and education(DSMES)** - (CDCES referral strongly recommended)

Stage 3 T1D management

- **“Insulin** should be initiated promptly and treated as the foundation of care. Rapid-acting insulin analogs are generally preferred for prandial dosing, and basal-bolus therapy should be individualized based on glycemic patterns, lifestyle, and patient capacity for self-management.
- **Early use of continuous glucose monitoring** should be encouraged, and automated insulin delivery systems should be offered when appropriate, based on patient preference, readiness, access, and clinical circumstances.
- Patients should **receive education on carbohydrate counting, insulin-to-carbohydrate ratios, correction dosing, hypoglycemia prevention and treatment, activity adjustments, and sick-day management**. Because this education is extensive, **referral to a CDCES** is valuable.
- Practical **self-management skills** include learning **insulin-to-carbohydrate ratios, applying correction factors to reach preprandial targets, and adjusting insulin safely during exercise or illness**.
- Determine correction factor – application of correction factor to achieve preprandial glucose targets
- **Sick-day education is essential for DKA prevention**. Patients should know to continue basal insulin even when oral intake is poor, check glucose frequently, stay hydrated, and monitor ketones when clinically indicated.”

ADCES Clinical Advantage Bootcamp Type 1 Diabetes Management – Modules 1 and 7.

The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate for Nurse Practitioners. Association of Diabetes Care and Education Specialists. Module 1 and module 7.



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ADA - Type 1 Diabetes Staging & PCP Actions

Stage 1 – Autoimmunity, Normoglycemia

- Multiple islet autoantibodies (GAD65, IA-2, ZnT8, IAA) with normal glucose
 - Screen at-risk individuals, educate on symptoms/DKA, refer for monitoring

Stage 2 – Autoimmunity, Dysglycemia

- Multiple autoantibodies with abnormal glucose, no symptoms
 - Monitor glycemia, reinforce DKA prevention, refer to endocrinology/Diabetology

Stage 3 – Clinical Type 1 Diabetes

- Overt hyperglycemia due to severe beta-cell loss
 - **Urgent referral**, assess for DKA, ensure prompt insulin initiation

Monitoring and Management in Adults

Regular monitoring is essential for early detection and disease management.

- **No autoantibodies** - Rescreen irrespective of PH/FH based on symptoms or clinical concerns.
- **1 Autoantibody positive** (Aab, A1c, blood glucose) monitoring:
 - Screen annually if risk factors (FH, dysglycemia, stress hyperglycemia)
 - Screen every 3 years if no risk factors
- **2 or more autoantibodies** (A1c stage 1, A1c + blood glucose or CGM if stage 2) – identify if in stage 1 or stage 2.

Stage 1: Annually x 5 years then every 2 years until progression

Stage 2: Every 6 months until progression

1. The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate for Nurse Practitioners. Association of Diabetes Care and Education Specialists. Module

2. American Diabetes Association Standards of Care. Diagnosis and Classification of Diabetes

Monitoring and Management in Children

Pediatric screening involves periodic autoantibody testing and metabolic staging based on age

- **No autoantibodies** - Rescreen every 1-3 years at well-child visits (ages 1-2 years, 4-6 years and 11-13 years old) if positive FH T1D or PH Autoimmune issue or irrespective of PH/FH based on symptoms or clinical concerns.
- **1 Autoantibody positive** (Aab, A1c, blood glucose) monitoring:
 - < 3 years old: every 6 months x 3 years then annually x 3 years
 - > 3 years old or older: annually x 3 year. Can stop monitoring if no progression
- **2 or more autoantibodies** (A1c, blood glucose) – identify if in stage 1 or stage 2.

Stage 1: < 3 years old every 3 months, ages 3-9 years old at least every 6 months and > 9 years old at least annually

Stage 2: Ages 0-17 years old monitor every 3 months.

1. The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate for Nurse Practitioners. Association of Diabetes Care and Education Specialists. Module 1.

2. American Diabetes Association Standards of Care. Diagnosis and Classification of Diabetes

Monitor and manage

Use of continuous glucose monitoring (CGM) and automated insulin delivery (AID) systems is encouraged



Glycemic goals are individualized, with most aiming for A1C <7%, adjusted for age and health status

DKA Prevention Pearls

Collaborate with Diabetology and Certified Diabetes Care and Education Specialists (CDCES) for crucial T1D education

Stage 1: Early identification enables anticipatory guidance and structured monitoring, which is associated with reduced likelihood of DKA at Stage 3 diagnosis.⁴

Stage 2: Frequent metabolic monitoring plus patient education focuses on **early recognition and prevention** of DKA during progression.^{3, 1}

Stage 3: Provide DKA education and sick-day guidance (including not stopping basal insulin during illness/fasting) as part of comprehensive diabetes education (DSMES and CDCES).¹



Treatment Strategies and Recent Therapeutic Advances

Insulin remains the cornerstone of T1D treatment, with recent innovations enhancing management.

- Intensive insulin therapy via multiple daily injections or pumps/AID is **standard of care**
- FDA-approved therapeutics include teplizumab (delays disease onset) and donislecel (may induce insulin independence)

Teplizumab, approved in 2022, delays progression by approximately 48 months

Donislecel, approved in 2023, offers potential for insulin independence in some patients

- Emerging therapies focus on disease modification and beta-cell preservation

Role of Technology in T1D Management

The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate for Nurse Practitioners. Association of Diabetes Care and Education Specialists. Module 1.

American Diabetes Association Professional Practice Committee for Diabetes*; 7. Diabetes Technology: Standards of Care in Diabetes—2026. Diabetes Care 1 January 2026; 49 (Supplement_1): S150–S165. <https://doi.org/10.2337/dc26-S007>

Technological advancements significantly improve disease control and patient quality of life.

- Continuous glucose monitoring (CGM) and automated insulin delivery (AID) systems are prominent
- Connected insulin pens and smart devices support better glycemic management
- Technology should be offered to **ALL** patients, along **with education and support**
- Glycemic targets should be personalized, with a focus on minimizing hypoglycemia

ADA Standard of Care 2026 – General Device Principles

- “AID systems are the **preferred insulin delivery system** in individuals with type 1 diabetes **and** type 2 diabetes on multiple daily injections (MDI) and people with other forms of insulin-deficient diabetes. They can be considered for use in people on basal insulin who are not reaching their targets. **Early initiation of AID therapy has been shown to be beneficial.**”
- “Diabetes technology should be initiated soon after the time of diagnosis and anytime thereafter, as indicated by the user’s needs and wishes. The use of CGM and BGM devices should be started from the outset of the diagnosis of diabetes, particularly in people who require insulin for management (3,4,15,16).”

The American Diabetes Association Standards of Care 2026 Recommendation

“7.25a AID systems are the preferred insulin delivery method over MDI, CSII, and sensor-augmented pumps in people with type 1 diabetes, **A** adults with type 2 diabetes, **A** children and adolescents with type 2 diabetes, **E** and those with other forms of insulin-deficient diabetes. **B, C, D, E** Choice of an AID system should be made based on the individual’s circumstances, preferences, and needs. **E”**⁵

AID Systems



iLet
(Beta Bionics)



Omnipod 5
(Insulet)



780G
(MiniMed)



T:slim X2 (Tandem)
Control IQ+



Mobi (Tandem)
Control IQ+



twiist (Sequel)
Tidepool Loop

New Libre DUO 10 from Abbott

www.freestyleprovider.abbott/us-en/libre-duo-dgk.html Accessed 10/03/26

Libre

Why CGM? Products Coverage How to Prescribe Libre Workflows DKA Risk LibreView Resources

REQUEST SAMPLES

Introducing the Libre DUO 10 Day system

The world's first dual glucose ketone sensor* is coming soon.

The Libre DUO 10 Day system does more¹¹ when early critical insights matter most¹², offering dual glucose and ketone monitoring in one sensor.



DKA is preventable⁵ but remains a burden³ for patients with diabetes.

DKA is a life-threatening condition⁴ that can impact patients with diabetes.



Hospitalization rate

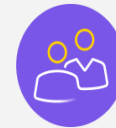


Death rate

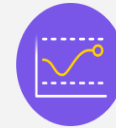


Risk in T1D and T2D

The world's first dual glucose ketone sensor*

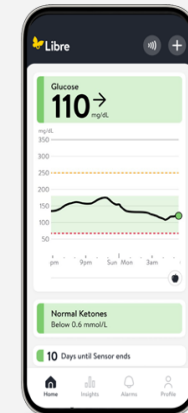


Easy CGM experience⁶ now with ketones for more complete diabetes management²



Delivers dual insights needed to help patients be aware of high or low glucose and rising ketones²

CGM = continuous glucose monitor(ing)



Ketone monitoring with the Libre DUO 10 Day system is coming soon.

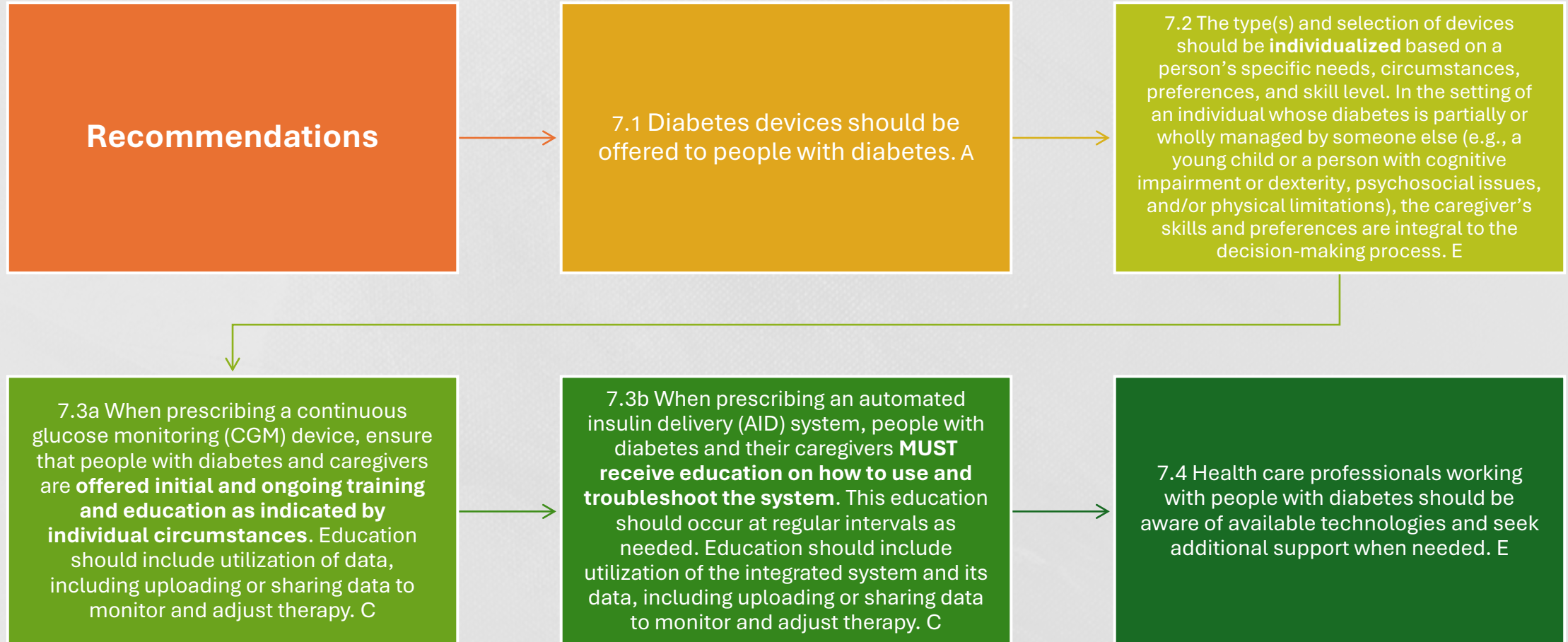


Start patients on glucose monitoring today with the FreeStyle Libre 3 Plus sensor.

Patients can easily see their glucose levels with a quick glance at their smartphone⁵. Get them started with a

ADA Standard of Care 2026 – General Device Principles American Diabetes Association

Professional Practice Committee for Diabetes*; 7. Diabetes Technology: Standards of Care in Diabetes—2026. Diabetes Care 1 January 2026; 49 (Supplement_1): S150–S165.
<https://doi.org/10.2337/dc26-S007>



ADA Standard of Care 2026 – General Device Principles Continued

7.5 People with diabetes using CGM, continuous subcutaneous insulin infusion (CSII), and/or AID for diabetes management should have continued access to devices across third-party payors, regardless of age or A1C levels. E

7.6 Children and adolescents should be supported at school in the use of diabetes technology, such as CGM systems, CSII, connected insulin pens, and AID systems. E

7.7 For adults with diabetes using diabetes technology, reasonable accommodations in educational and work settings should include having sufficient time to manage their devices and respond to high and low glucose levels. E

7.8 **Consider early initiation**, including at diagnosis, of CGM, CSII, and AID depending on a person's or caregiver's needs and preferences. C

7.8a There should be no requirement of C-peptide level, B the presence of islet autoantibodies, B or duration of insulin treatment C before initiation of CSII or AID.

7.9 Standardized reports for all CGM, CSII, AID, and connected insulin devices with a minimum of a single-page report, such as the standardized CGM report and weekly summary, should be available and utilized. Options for daily and weekly reports and raw data should be available. E

American Diabetes Association Professional Practice Committee for Diabetes*; 7. Diabetes Technology: Standards of Care in Diabetes—2026. Diabetes Care 1 January 2026; 49 (Supplement_1): S150–S165. <https://doi.org/10.2337/dc26-S007>

ADA Standard of Care 2026 – General Device Principles Continued

“In general, no device used in diabetes management works optimally without education, training, and ongoing support. Those with more education regarding device use have better outcomes (1,2); therefore, the need for additional education should be periodically assessed, particularly if treatment goals are not being met.”



“Insulin pumps and AID systems...generally require training and education for safe use.” “...training with a certified or trained diabetes educator and education specialist is necessary for full understanding and **safe** use of the technology.”

Diabetes Technology – key takeaways

- Technology can improve glycemic outcomes and **reduce daily diabetes burden**, but successful use requires thoughtful linkage to training, follow-up, and troubleshooting support.
- Current standards **support early use of CGM** and reduced barriers to initiating insulin delivery technology when it aligns with patient needs and preferences.
- CGM can be initiated in primary care and does not need to be deferred solely for endocrinology referral.
- AID systems can **substantially improve glycemic control** and **lessen daily treatment burden** for many patients, although they are not the right fit for every individual.
- Insulin pumps and AID systems require **patient readiness, adequate training, and ongoing support**. Coverage and access barriers may still occur, so **referral pathways to diabetes educators or device experts can be especially helpful**.
- **Education is not a one-time event**. Many patients benefit from starting with a safe basal-bolus regimen and building toward more advanced technology **over several visits** as confidence, health literacy, and self-management skills develop.
- **A safe starting regimen, paired with structured education, remains the priority.**

Psychosocial and Social Determinants of Health



T1D imposes a substantial psychosocial burden, affecting mental health and social interactions.



Increased risk of anxiety (20%) and depression (3-fold)



33% experience diabetes distress within 18 months



Social determinants of health impact care quality and access



Best practices include mental health support, patient education, and addressing social barriers

Social and Racial Disparities in T1D Management

- Racial disparities exist in access to diabetes technology and treatment. ^{2,3}
- Social determinants influence clinical outcomes and health inequities. ^{2,3}
- Screening for SDOH is crucial for care equity. ^{2,3}
- Underrepresented groups face higher rates of complications and mortality.
- Resources aim to increase screening and engagement among diverse populations.^{2,3}

Primary Care's Role in T1D Recognition and Management

Primary care clinicians are vital in early detection, disease staging, and referral.

- Over 50% of medical visits occur in primary care settings
- Recognize hallmark features: polyphagia, polydipsia, polyuria, weight loss, fatigue
- Implement screening protocols, especially in high-risk populations
- Establish multidisciplinary referral pathways for comprehensive care (Diabetology, Diabetes Care and Education, etc)
- Collaborative team care in disease education, psychosocial support, and technology adoption

Table 1: ADA Type 1 Diabetes Staging & PCP Actions
Stage | Definition | Labs | PCP Action

Stage	Definition	Labs	Recommended PCP Actions
Stage 1 (Autoimmunity, Normoglycemia, Presymptomatic)	Multiple islet autoantibodies with normoglycemia and no symptoms. ¹	Islet autoantibodies: GAD65, IA-2, ZnT8, IAA (panel examples). ¹	Screen increased-risk individuals with islet autoantibodies; counsel on symptoms of hyperglycemia and DKA prevention; refer for staging/structured monitoring when autoantibody-positive. ^{1, 4}
Stage 2 (Autoimmunity, Dysglycemia, Presymptomatic)	Islet autoantibodies (usually multiple) with dysglycemia and no symptoms. ¹	Dysglycemia (ADA thresholds): IFG FPG 100–125 mg/dL; IGT 2-h PG 140–199 mg/dL; A1C 5.7%–6.4%. ² (Toolkit also lists these criteria for staging.) ^{1, 2}	Monitor progression: A1C ~ every 6 months and 75-g OGTT annually (fasting + 2-h PG); adjust frequency based on individual risk factors. ³ Refer diabetology/endocrinology/structured program for ongoing monitoring and stage-specific counseling. ^{3, 4}
Stage 3 (Clinical T1D)	Overt hyperglycemia meeting standard diagnostic criteria; typically symptomatic. ^{1, 2}	Diabetes diagnostic criteria (ADA): A1C ≥6.5%, or FPG ≥126 mg/dL, or 2-h PG ≥200 mg/dL during OGTT, or random PG ≥200 mg/dL with classic symptoms/hyperglycemic crisis. ²	Evaluate urgently for hyperglycemic crisis (including DKA when clinically indicated) and expedite endocrinology management; ensure timely insulin initiation per standard of care and DSMES linkage. ^{2, 1}
Stage 2 → Delay of Stage 3 (Disease-modifying therapy)	***“Teplizumab-mzwv infusion to delay the onset of symptomatic type 1 diabetes should be discussed with selected individuals aged ≥8 years with stage 2 type 1 diabetes. Management should be in a setting with appropriately trained personnel.”** ⁵	Confirm Stage 2 with ≥2 positive pancreatic islet autoantibodies plus dysglycemia per prescribing information. ⁶	Refer eligible Stage 2 patients for shared decision-making in specialty care; therapy is administered/monitored in an appropriate clinical setting per recommendation and labeling. ^{5, 6}

Key takeaways for primary care

Early detection of T1D is important for reducing DKA risk and supporting earlier education, staging, and treatment planning.^{2,3}

Islet autoantibody testing is the “backbone” of T1D screening.^{2,3}

Risk assessment should include family history of T1D and personal or family history of autoimmune conditions such as thyroid disease, celiac disease, pernicious anemia, or vitiligo.^{2,3}

Differential diagnosis is particularly important in adults, given the high rate of initial misclassification as type 2 diabetes.^{2,3}

- ***Approx 40% of T1D cases in adults are misdiagnosed as T2D***

Broader screening strategies may expand over time as evidence and implementation pathways continue to evolve.^{2,3}

Summary of key treatment takeaways for Type 1 diabetes in primary care

1. Intensive insulin replacement remains the keystone of active T1D treatment

2. Diabetes technology (i.e., AID, insulin pumps, CGM, connected insulin pens, etc.) should be offered to **ALL** patients (according to the ADA Standards of Care 2026)

- Diabetes self-management **education** and **support** (DSMES) and **resources MUST** also be provided (preferably by a CDCES)

3. Individualize glycemic goals

4. T1D disease-modifying therapeutics

- a. Teplizumab (FDA-approved) – Delays need for exogenous insulin
- b. Donislecel (FDA-approved) – Replaces exogenous insulin

5. Collaborative and team-based care (PCP, Diabetology, CDCES, RDN, etc.).

- The State of the Science in Type 1 Diabetes: Best Practice Screening, Staging and Treatment Clinical Advantage Bootcamp: Type 1 Diabetes Management Certificate. Association of Diabetes Care and Education Specialists. Module 1.

Primary Care Workflow: SCREEN → MONITOR → REFER

SCREEN

Identify increased-risk individuals (family history of T1D or autoimmune disease)

Order **islet autoantibodies (GAD65, IA-2, ZnT8, IAA)**

MONITOR

Stage disease (Stage 1 vs Stage 2) 2 or more Aabs

Periodic A1C/glucose testing –
A1c stage 1 annually x 5 years
then q 2 yrs until progression.
A1C + SMBG or CGM stage 2
every 6 months

Patient education and DKA
prevention counseling

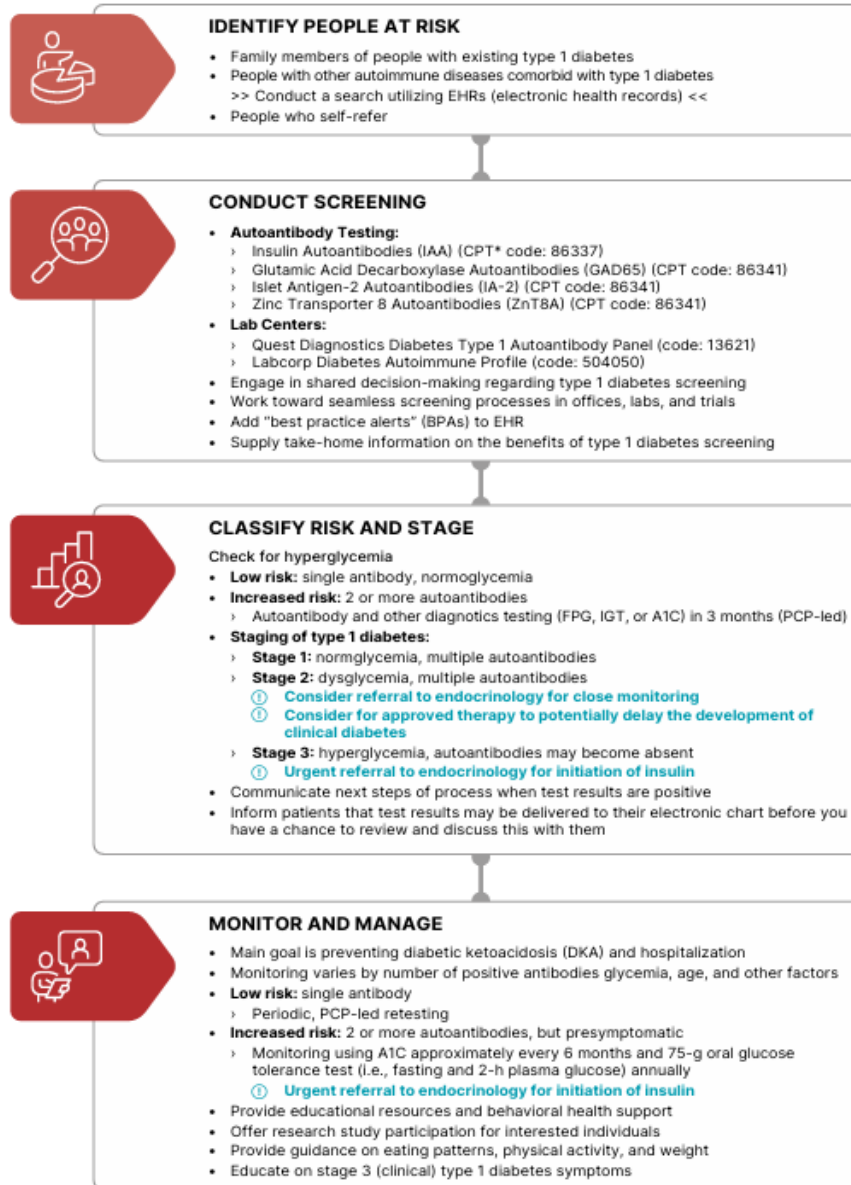
REFER

Diabetology or Endocrinology or
structured T1D program

Disease-modifying therapy
evaluation (Stage 2)

DSMES/CDCES coordination –
Education on symptoms and DKA
and hypoglycemia prevention

TYPE 1 DIABETES SCREENING WORKFLOW



The science behind type 1 diabetes screening and staging is evolving fast. This document is intended to provide health care professionals guidance on clinical workflow for type 1 diabetes screening based on an American Diabetes Association® (ADA) expert panel discussion and doesn't necessarily represent the official recommendations in ADA's Standards of Care in Diabetes.

A1C, glycated hemoglobin; DKA, diabetic ketoacidosis; EHR, electronic health record; PCP, primary care professional; FPG, fasting plasma glucose; IGT, impaired glucose tolerance.

*CPT is the registered trademark of the American Medical Association.

BACK TO TOP

For more information or to access resources, visit professional.diabetes.org/T1D



American Diabetes Association
Type 1 Diabetes Toolkit

American Academy of Physician Associates (AAPA) Screening Toolkit

<https://www.aapa.org/education/clinical-resource-library/type-1-diabetes-toolkit/>

SCREENING For Type 1 Diabetes

Early detection of presymptomatic type 1 diabetes (T1D) can significantly reduce the likelihood of diabetic ketoacidosis (DKA). Screening and monitoring of high-risk children can reduce the frequency of DKA at T1D diagnosis from up to 62% to less than 5%.^{1,2}

Individuals with a family history of T1D or known genetic risk should be referred for screening.

- Screening at 3 to 4 years of age should capture most cases.
- If repeated testing can be performed, initial testing at 2 years of age can help detect early onset cases of T1D, in which the risk for DKA is the highest.
- Universal screening for T1D is not currently recommended.
- Adults with new-onset diabetes and a family history of autoimmune disease, personal history of autoimmunity, or other risk factors, may be considered for T1D screening as well.³

Up to 90% of people who develop T1D do not have a family history of the disease.¹

The Autoimmunity Screening for Kids (ASK) Research Program through the University of Colorado provides free screening for T1D for all U.S. children (ages 1-17) and adults.

Screening for T1D is done via the detection of autoantibodies.

Insulin (IAA) autoantibodies (CPT 86337)
Glutamic acid decarboxylase (GAD) autoantibodies (CPT 86341 let cell antibody)
Islet antigen 2 (IA2) autoantibodies (CPT 86341 let cell antibody)
Zinc transporter 8 (ZnT8) autoantibodies (CPT 86341 let cell antibody)⁴

Positivity for multiple (≥2) islet autoantibodies is a significant risk factor for progression to clinical diabetes.

Approximately 70% progress to clinical T1D within 10 years; nearly 100% over the lifetime.²

All positive results should be confirmed with repeat testing.

If screening is negative for multiple autoantibodies, repeat testing may be warranted at a later time for patients who are under 18 years of age.

Additional resources:

Breakthrough T1D – Screening options for early detection of T1D

Standards of Care in Diabetes – Guidelines from the American Diabetes Association (ADA) on the management of diabetes, including early detection and screening

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Additional Resources

Autoantibodies, T1D – Screening options for early detection of T1D

Standards of Care in Diabetes – Guidelines from the American Diabetes Association (ADA) on the management of diabetes, including early detection and screening

SCREEN POSITIVE FOR TYPE 1 DIABETES: What Comes Next?

Testing positive for multiple islet autoantibodies is a significant risk factor for type 1 diabetes (T1D).

- Screen positive for multiple autoantibodies, even in the absence of dysglycemia, represents a preclinical stage of T1D.¹
- 70% of patients who screen positive for multiple autoantibodies progress to clinical T1D within 10 years, and nearly 100% progress over their lifetime.²
- An estimated 15% of patients who test positive for a single autoantibody progress to T1D within 10 years.

In the event of a positive screen, confirmatory testing should be done to minimize the risk for false positives.

Patients who screen positive for preclinical T1D may be eligible for preventive treatment to delay the onset of clinical disease.

Repeat testing can be performed in the clinic or through screening programs such as TrialNet or the Autoimmunity Screening for Kids (ASK) program.

Teplizumab (Tzield®) is an immune-modulating monoclonal antibody that can be used to delay the onset of clinical T1D in individuals ≥8 years of age with stage 2 T1D (multiple autoantibodies + dysglycemia).³

Consider referral to a specialized diabetes center for further evaluation and treatment for any patient who tests positive for multiple autoantibodies.

In a phase 2 clinical trial, a 14-day course of teplizumab in individuals with a family history of T1D:⁴

- Reduced the likelihood of developing T1D by 59% over six months.
- Delayed the median time to diagnosis of T1D from 24.4 months (placebo) to 48.4 months (teplizumab).

Regular glucose monitoring is recommended for all patients who screen positive for early-stage T1D to reduce the risk for diabetic ketoacidosis (DKA).

General screening recommendations:⁵

Children and adolescents:	Children who screen positive before age 3:	Adults:
every six to 12 months	every three to six months	at least yearly

Children who test positive for one autoantibody may benefit from autoantibody and metabolic monitoring for the first two years after detection (more frequent monitoring is recommended for those <3 years).

Consensus guidance for monitoring is available from the American Diabetes Association.

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AAPA
American Academy of Physician Associates
Supported by Sanofi



Multidisciplinary
collaboration in
optimizing
patient
outcomes

Diabetes Care Team

- Certified Diabetes Care and Education Specialist (CDCES)
 - Diabetologist/Specialist in Diabetes management/Endocrinologist – clinician (PA/NP/Physician) and often holds Board-Certified Advanced Diabetes Management (BC-ADM) board certification and/or board certification in Diabetology or Endocrinology
 - Primary Care Provider (PCP)
 - RDN
 - Dental
 - Eye
 - RN/MA (nursing staff)
- 

Diabusters!!!

- <https://youtu.be/Uvck7ItXwdc?si=E7jA5KkTZEdvu753>

What is Diabetes Self-Management Education and Support (DSMES)?

- A **DSMES** program gives you the knowledge, skills and support to manage your diabetes. It provides you with the foundation to help you navigate your daily self-care with confidence and is provided by a **Certified Diabetes Care and Education Specialist (CDCES)**, an experienced health care professional such as a PA/NP, Physician, registered nurse, registered dietitian, pharmacist and others who have gone on to specialize in diabetes.

Association of Diabetes Care and Education Specialists. Accessed January 19, 2026. Accessed May 29th, 2026. www.adces.org

Certification Board for Diabetes Care and Education (CBDCE) Accessed May 29th, 2026. www.cbdce.org/cdces



Diabetology - A new medical specialty!

Diabetology

A family medicine physician who specializes in diagnosis and management of type 1, type 2, gestational, and atypical diabetes; diabetes complications; hospital management of diabetic patients; use of technology in the treatment and monitoring of diabetes; management of ancillary diagnoses, such as hypertension, obesity, lipidemia, etc.; and education and counseling on nutrition and lifestyle management.

Source: American College of Diabetology, www.acdiabetology.org.

Additional Resources: Board certification for physicians is provided by the American College of Diabetology.

PA focus group for the ACD to evaluate a pathway for PAs to become board-certified PA Diabetologists

Summary:

Type 1 diabetes is a staged autoimmune disease that can be identified and managed before symptom onset through islet autoantibody screening.

This overview highlights the advancements in understanding, diagnosing, and treating type 1 diabetes, with a focus on disease modification, early detection, technological integration, and addressing disparities to improve patient outcomes.^{2,3}

Questions?



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Diabetes Health Care Team!

Recognize that Diabetes Distress management is a **team-based** approach which includes:

- Clinicians/Diabetologists(PAs, NPs, Physicians, PharmDs)
- Registered Dietitians
- Certified Diabetes Care and Education Specialists (CDCES)
- Behavioral/Mental Health providers
- RNs, MAs, Support staff

Certified Diabetes Care and Education Specialists (CDCES)

- We are poised and ready to respond!
- We have the time and the training!
- We are here to support you and the person with Diabetes!

