

Type 1 diabetes screening: Why one protocol worked across 8 nations

Written by The Life Science Feed Editorial Team · Published 1 October 2026 · Edited by Mara Voss

Type 1 diabetes usually announces itself with a hospital admission, yet blood tests can find it years earlier. A screening programme run in 8 European countries and presented at EASD 2026 tested 140,568 young people and concluded that early detection works across very different health systems.^{1,2}

KEY TAKEAWAYS

- **The Pivot:** A common screening protocol worked across 8 European countries and very different health systems, which moves type 1 diabetes screening from research pilots toward routine care.
- **The Data:** Of 140,568 young people screened, 2.13% (about 1 in 45) with a first-degree relative and 0.32% (about 1 in 350) without had early-stage type 1 diabetes, 634 in all.
- **The Action:** Follow the proposed schedule of testing at ages 2 to 4, 6 to 8 and 10 to 15, and expect national programmes to adapt it, since participation rates and cost were not reported.

Type 1 diabetes now has 3 defined stages. Stages 1 and 2 are presymptomatic, with islet autoantibodies and, in stage 2, abnormal glucose, while stage 3 is the symptomatic disease that clinicians have traditionally diagnosed. Finding people early matters more than it used to, because prevention and disease-modifying treatments are emerging, with teplizumab already available, and because identifying presymptomatic disease is associated with a lower risk of diabetic ketoacidosis at diagnosis.²

The EDENT1FI consortium is co-ordinated by Professor Chantal Mathieu of KU Leuven and Professor Anette-Gabriele Ziegler of Helmholtz Munich. It applied one common protocol at sites in the Czech Republic, Denmark and Sweden, Germany, Italy, Poland, Portugal and the United Kingdom. Screening covered ages 2 to 10 in Germany and 2 to 17 elsewhere. The first test used capillary blood, dried blood spots in the UK, for 3 autoantibodies, GADA, IA-2A and ZnT8A, and positives were retested for 4, adding IAA, at 2 central laboratories in Munich and Milan.^{1,2}

The Numbers

A total of 140,568 young people took part, 49.2% of them female, at a median age of 7.6 years. Of these, 10,273 (7.3%) had a first-degree relative with type 1 diabetes and 127,754 (90.9%) did not, with family history unreported for 2,541. Early-stage type 1 diabetes was found in 219 of those with a relative, 2.13% or about 1 in 45, and in 408 of those without, 0.32% or about 1 in 350. In all, 634 participants had early-stage disease.^{1,2}

Among children without a family history, the rate varied by country, from 0.22% in Germany to 0.42% in the UK and

0.47% in Sweden, and rose with age, from 0.22% under 4 years to 0.31% at 4 to under 8 and 0.40% at 8 to under 13. The German figure comes from a younger group, with a median age of 4.3 years, which probably explains part of the gap. In Germany, 90 of the children without a relative (0.22%) and 35 of those with one (1.36%) had early-stage disease.^{1,2}

The UK screened 17,409 children at a median age of 8.4 years and found 59 cases without a relative (0.42%) and 67 with one (3.43%). Sweden screened 7,926 at a median age of 9.4 and found 36 without (0.47%) and 4 with (1.21%), though Denmark and Sweden are reported together because the screening ran across the Öresund Region. In Italy, 4,507 children were screened, including 3,641 without a first-degree relative, and 5 of them (0.14%) had early-stage disease. None of the 167 Italian children with a relative did.^{1,2}

Only 386 of the 634 participants with early-stage disease (61%) completed metabolic staging, and among them 300 (78%) were stage 1, 70 (18%) stage 2 and 16 (4.1%) already stage 3, meaning symptomatic disease had been reached before the screen caught it. Participants with early-stage disease were invited for education and are included in the European pre-T1D Registry.^{1,2}

What the Authors Recommend and What Remains Open

The authors recommend general population screening at 3 points: at ages 2 to 4, again at 6 to 8 for children who were antibody-negative, and again at 10 to 15. Children who have never been screened could join the schedule at the earliest opportunity. They say integration with other health initiatives should be targeted and will differ by country, and that the next step is folding screening into standard care. Their summary is that principles first developed in Germany can be applied in regions with different healthcare systems.²

Several details limit how far the numbers can be pushed. The sites used different age ranges and slightly different protocols, so the country-by-country prevalence figures are not a clean league table, and Denmark and Sweden cannot be separated. Sites also differ in how many participants reached staging, and the release does not report participation rates, although measuring them was one stated aim of the study. Those rates determine how well a programme would perform once it is offered to everyone rather than to volunteers.^{1,2}

The family-history contrast is striking but must be read with the denominators. A child with a first-degree relative was roughly 7 times as likely to have early-stage disease, yet only 7.3% of those screened had a relative. Because the bulk of children screened had none, most cases still arose in that larger group, which is the argument for population screening over screening relatives alone. The UK figure of 3.43% in children with a relative, higher than in other countries, may reflect the dried blood spot method or the recruited population, and the release does not say.^{1,2}

Italy has legislated for nationwide type 1 diabetes screening, but the government and regional health systems are still working out implementation. Two of the authors, Ziegler and Achenbach, report advisory board membership and lecture support from Sanofi-Aventis, and Ziegler also from Novo Nordisk, and the other authors declare no conflicts. There is no full paper yet, but the authors recently published a consensus statement on screening in *Diabetologia* that sets out their recommended approach in more detail.²

CLINICAL IMPLICATIONS

The practical message is that a positive result in this setting is not rare. About 1 in 350 children with no relative with type 1 diabetes was already in an early stage, so a screening programme in a general population will find many families who had no reason to expect it. Clinicians should be prepared to explain what stage 1 and stage 2 mean, that progression to symptomatic disease is likely but the timing is uncertain, and that education and monitoring are the immediate benefits.

Only 61% of those with early-stage disease completed metabolic staging, and 4.1% of those who did were already at stage 3. That is both an argument for screening earlier and a warning that follow-up systems need to be built alongside the test, because a positive screen that is not followed by staging delivers little of the benefit.

The recommended schedule is the authors' proposal, not a guideline adopted by any health system, and no full paper has yet undergone peer review. Health services considering it will need to weigh cost, participation

and the availability of monitoring and treatment such as teplizumab, and clinicians can expect questions from parents well before national programmes catch up.

EDITORIAL & AI STANDARDS

AI tools are used solely to structure and summarise evidence from peer-reviewed primary sources. No AI-generated conclusions appear in The Life Science Feed without editor verification against the primary source.

REFERENCES

1. Achenbach P, Ziegler AG, et al. EDENT1FI consortium screening for early-stage type 1 diabetes (short oral presentation 398). Presented at: European Association for the Study of Diabetes (EASD) Annual Meeting; September 28-October 2, 2026; Milan, Italy. No full paper; not yet submitted to a journal at the time of writing.
2. European Association for the Study of Diabetes. Study across eight European countries shows that screening for type 1 diabetes can be effectively implemented in children across Europe (EDENT1FI). EASD press release, embargoed to October 2, 2026.

LICENCE & RIGHTS

© 2026 The Life Science Feed. All rights reserved. This content is produced for medical education purposes. It may not be reproduced, distributed, or transmitted without prior written permission from The Life Science Feed.

MEDICAL DISCLAIMER

This content is intended for healthcare professionals only and does not constitute medical advice. Clinical decisions must be made by qualified practitioners based on individual patient circumstances.

FOLLOW THE LIFE SCIENCE FEED

Instagram @lifesciencefeed **LinkedIn** linkedin.com/company/thelifesciencefeed

thelifesciencefeed.com