

SCHOOL-BASED SCREENING FOR EARLY-STAGE TYPE 1 DIABETES: RESULTS FROM THE EDENT1FI PROGRAMME IN PORTUGAL

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Background: Type 1 diabetes (T1D) is a multifactorial autoimmune disease. Autoantibodies (Aab) are key markers of its early stages. EDENT1FI is a European initiative focused on screening pre-symptomatic T1D in children and adolescents.

Aim: In Portugal, screens were conducted at health facilities, community events and schools. We aim to characterize adherence to T1D screening in schools, a learning and socialization environment where children and adolescents spend their day.

Method: The clinical team presented the project to schools, provided informative documents, and informed consent with an initial questionnaire to collect demographic data. After guardian consent, screening is scheduled at school. The screening requires a capillary blood sample and uses an ELISA kit for GAD, IA-2A and ZnT8. Positive samples are further tested for all four Aab (including IAA) in the same sample using LIPS, with venous confirmation if positive. Individuals with multiple Aab are referred to clinical follow-up, which includes metabolic staging (OGTT), CGM and psychological follow-up.

Result: Up to May 2026, 12.312 screenings were carried out, of which 47% were in 78 schools (62% public and 38% private), in children and adolescents aged 3 to 17 years, with a mean age of 10.2 ± 3.6 , and 3.7% having a first-degree family T1D history. After confirmation of the venous test, 0.34% of individuals had two or more positive Aab (global sample prevalence 0,37%) and were therefore classified as having early-stage T1D. All participants adhered to the follow-up protocol.

Conclusion: This screening methodology has proven to be very effective in schools. The school environment allows for better family participation; parents do not need to go to health services for screening, and children and young people are with their friends and peers, which provides security and a relaxed environment. Early identification of children and adolescents with type 1 diabetes has enabled timely access to a staging and education program, opening new perspectives for treatment.