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Genome-Environment Interactions in Type 1 Diabetes

Integrated GE³LS Research

Genome-environment interactions in Type 1 diabetes:
Attitudes of Adults and Adolescents to Predictive
Genetic Testing for Diabetes

GE³LS Project Leaders

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Summary

Recent research advances mean that Research Ethics Boards (REBs) are now reviewing protocols that involve predictive genetic testing in children. While issues surrounding predictive genetic testing are clear in adults, there remain significant problems regarding the ethics of predictive testing in children. Further information on the acceptability and impact of predictive testing in children and adolescents and their families is required so as to allow REBs to better quantify risks and benefits of such studies.

The objectives of our research study include : 1). Examine the views of first-degree relatives of diabetics to predictive testing for type 1 diabetes as compared to the non-diabetic population. 2). Determine the views of first degree relatives of diabetics as compared to the general population, relating to studies on gene-environment interaction for Type 1 Diabetes (T1D). 3). Examine the views of children and young adolescents who are able to provide assent. 4). Determine the effect of having a child with T1D on parent's perceived risk to other children and impact on anxiety levels and family functioning.

This information should help to guide investigators, REB members and research participants on the key elements that need to be included in consent forms for research in T1D that includes predictive testing. Many other childhood diseases, including asthma and Crohn's disease, are now understood to involve genome-environment interactions. Information gained in the GE³LS component of our project will be generalisable to many other disorders and will be very important as other large population-based predictive studies are undertaken.