



A Christmas present for the BOX Study Your family is one of more than 2,000 families participating in the BOX Study. Because of the importance of this study we are delighted to have obtained funding from Diabetes UK for a further 5 years to continue to expand the study. In addition, we have been awarded funding from the JDRF to study people in BOX who develop diabetes early in life, compared with those who progress very slowly.



A New Chief Investigator for BOX Dr Kathleen Gillespie who specialises in studying the mechanisms underlying autoimmunity, has been appointed new Chief Investigator of the BOX study on Professor Polly Bingley's retirement. We are grateful to Prof Bingley for running the study for the last decade. Kathleen has been part of the BOX team since 1998 so she knows the study well.

New BOX Bio Resource We aim to collect new biological samples from family members who have and who don't have type 1 diabetes to create a unique and valuable multi-generational resource. Research samples that we have safely stored since the beginning of the study over 30 years ago, will be added to the collection.

New sample collection We will collect and examine samples such as blood, mouth swab, urine and faeces to look for important genes and risk markers in type 1 diabetes and related autoimmune conditions. We will study a relatively recent area of research looking at gut bacteria (the gut microbiome) and pancreatic function in type 1 diabetes. To help us understand why type 1 diabetes is increasing we will examine how these markers have changed compared to those in the previous generation of each family.

Take your samples at home We will start recruiting into the new phase in 2016 starting in Buckinghamshire. We have developed **sample collection kits** (for all sample types) using tried and tested methods, so you can take samples for us easily at home with no appointments necessary and return them to us via ordinary post. Further information including 'how to take your sample' videos will soon be available on our website. The understanding we gain from this work will be vital for future efforts to prevent type 1 diabetes.

Portfolio status BOX has been adopted by the National Institute of Health Research as a portfolio study which means we now have additional support from clinical research nurses in your region. These nurses based in local hospitals will register families of children and young people newly diagnosed and take samples to support our research.

Do people with longstanding type 1 diabetes still make insulin? We carried out a pilot study in people who have been diagnosed with type 1 diabetes for more than 10 years. We asked for a blood sample for islet autoantibody testing and a urine sample to test for C-peptide, a marker of insulin production in the pancreatic beta cells. We found 16% still have small amounts of insulin production (though not enough to affect blood sugar levels) and some still have significant levels of autoantibodies. We will investigate the reasons behind this further by collecting more samples in the future.

Thank you for your help and support to the BOX Study
We wish you a festive holiday season and a very Happy New Year.

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