Family Information Sheet

THE BART'S OXFORD (BOX) FAMILY STUDY: Understanding the causes of Type 1 diabetes: Stage 1

Your invitation to take part in Stage 1.

- Before you decide whether to take part in this research, it is important for you to understand what the BOX study is and what is involved.
- You may be new to the BOX study or have supported us previously, either way please take the time to read the following information carefully.
- You are free to decide whether to take part, this will not affect the care you receive from your own doctors.
- Please ask us if anything is not clear or you would like further information.

Link to our website and introductory video by scanning this QR Code

Thank you for considering taking part in this research project within the BOX Family Study.

Introduction:

What is the purpose of the family study?

- Our main aim is to find out how type 1 diabetes occurs and to stop it happening in the future.
- Close relatives share some of the same genes and live in the same environment as the child/young adult who has developed type 1 diabetes. Therefore, studying **all members of the family** are important for understanding why and how type 1 diabetes develops.
- By studying questionnaire data and biological samples (e.g. blood) collected from people *with and without* type 1 diabetes **in the same families** over time our researchers may be able to work out why some people develop this condition while others do not.

BOX research is split into two parts: This information sheet details what will happen if you decide to take part in stage one. There is a separate participant information sheet for stage two. You are under no obligation to take part.

What is Type 1 Diabetes?

- Type 1 diabetes is an autoimmune condition. The immune system, which is meant to protect us from infections, such as viruses and bacteria, mistakenly attacks and destroys the beta cells in our pancreas that produce insulin.

- Tests developed in our laboratories can detect in a small blood sample whether proteins called islet autoantibodies are present. If so, this could mean that the insulin producing cells may be damaged. Certain kinds of islet autoantibodies can be found in the blood many years before type 1 diabetes occurs.

Why have I been invited?

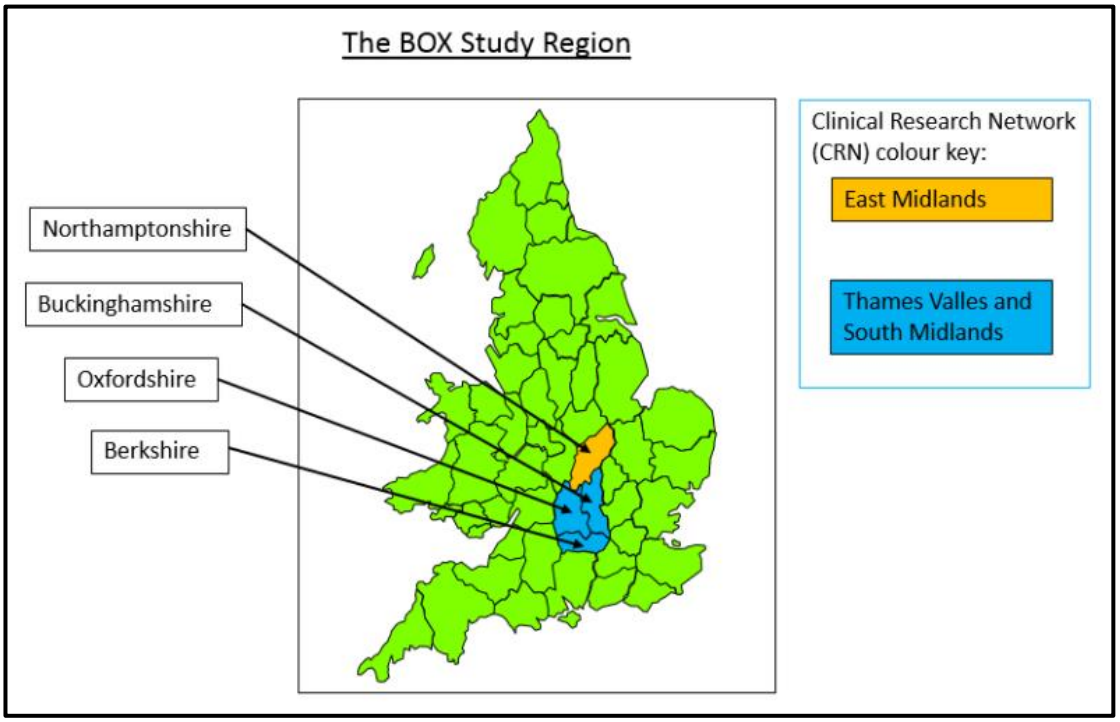
You are being given this information because one of the children in your family has developed type 1 diabetes, **or** you (your child) are already listed on the BOX register as a relative of someone referred with type 1 diabetes.

If you have type 1 diabetes, you must be:

- Under age 21 years when diagnosed within the study region (NHS Trust referral).
- Newly diagnosed or recruited to the BOX Study already.

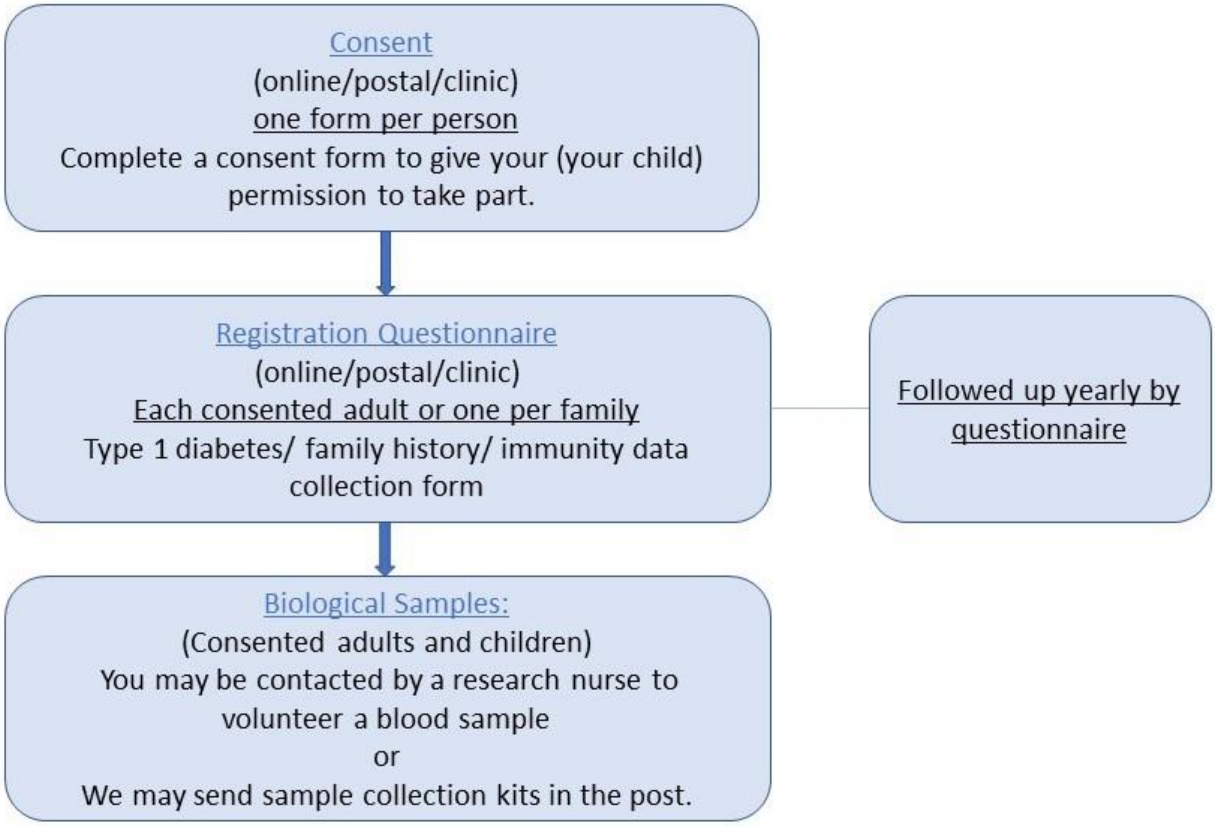
If you are a relative (with or without diabetes), you must be:

- A **first-degree blood relative** of the above person (diagnosed with type 1 diabetes) this is his/her Mother, Father, Brother, Sister, Son or Daughter.
- A **second-degree blood relative** of the above person (diagnosed with type 1 diabetes) we are currently inviting half siblings, nephew(s), niece(s), grandchildren.



Important: Please let us know if you (or your child) are currently taking part in a clinical trial or if you are taking any medication which suppresses the immune system as this may affect participation.

What will taking part in Stage 1 involve



Registration of children/families diagnosed with type 1 diabetes within the last six months is usually by appointment with an NHS hospital Research Nurse within our region (see map on page 4), at a time that is convenient for you (perhaps after your child's diabetes clinic appointment).

If you (your family) are not routinely attending a type 1 diabetes clinic or are already registered in the BOX Study, we will offer postal or online registration.

We ask <u>everyone</u> to give consent:

- To take up to two teaspoons (10ml) of blood at a clinic appointment or the following postal sample collection kits may be used:
    - Mouthbrush to study type 1 diabetes related genes (DNA).
    - Finger prick; a few drops of capillary blood collected into a small tube.

<u>In addition</u> to the above and *only applicable* to the family member who has developed type 1 diabetes (NHS referral) to give consent:

- To share a sample of blood that was taken by the hospital doctors around the time type 1 diabetes was diagnosed (if available). This sample is important as it allows us to measure the islet autoantibodies before or close to the time insulin treatment commenced.
- To check the relevant sections of medical notes and data collected during the study. This information may be looked at by individuals from the study team, (from regulatory authorities or from the NHS Trust, this is to ensure that the study is conducted correctly).
- To collect urine sample(s) to measure C-peptide which is produced alongside insulin. This gives an indication of the functioning of the insulin producing cells in the pancreas.

Optional consent items are:

- To inform your family doctor (GP) and where relevant your type 1 diabetes consultant specialist of your participation.
- To collect NHS numbers from all members of the family (including the person recently diagnosed), and to use this number to trace the doctor looking after them through NHS Health & Social Care/NHS Central Records. This is commonly done in long term studies as a way of following people's progress over long periods of time. This will not be recorded in their medical records and will not affect their future treatment in any way.
- To be informed of future research studies.

Do I have to take part?

Taking part is completely voluntary, it is up to you whether you decide to take part. If you do take part, you will receive a copy of your signed consent form and this information sheet to keep. You can withdraw at any time and you do not need to give a reason, the standard of your medical care or treatment you receive in the future will not be affected.

What are the possible benefits of taking part in BOX?

There is no guarantee that you will benefit from this study. If you are a relative and were to develop type 1 diabetes, it is possible that diabetes or high sugar levels would be found sooner and decrease the chance of sickness and hospitalisation. In the long run, information obtained from BOX and similar studies may lead to ways of preventing the development of type 1 diabetes.

*W*hat are the possible disadvantages and risks of taking part?

- You could have discomfort and/or a bruise when you get your blood drawn. Once in a while, some people faint. It is very rare, but some people may get an infection, a small blood clot, swelling of the vein and surrounding tissue or bleeding where the needle enters the skin.

- Since this research involves studying islet autoantibodies that can predict getting type 1 diabetes, there are other kinds of risks. If you learn that you are at greater risk for type 1 diabetes, it could make you worried. In order to reduce worry, at the time you are given any test results, we will explain their meaning to you.

Will I find out the results on any samples I give?

Genetic: Type 1 diabetes related genes.

We are not able to give results or feedback genetic information to participants. This is because on an individual basis alone, they don't provide useful information, however they are extremely valuable in our research when we are looking at trends within populations.

C-peptide: Urinary c-peptide creatinine ratio (UCPCR) beta cell function

These results will not routinely be given, but we are happy to discuss all results on request.

Islet autoantibody markers for relatives:

- If you have islet autoantibody markers present in your (or your child's) blood you may be more likely to develop type 1 diabetes than other people.

- You can decide *whether you wish* to find out your (or your child's) islet autoantibody results. If you do not wish to find out, we will still invite you for Stage 2 annual/yearly collection of samples and questionnaire follow up.

We may contact you about any matters related to data or sample collection e.g. If your (your child) samples are not sufficient volume or quality for testing. We may ask if you (or your child) would be willing to provide a repeat sample(s). If you have requested to receive islet autoantibody results, they routinely take eight to ten weeks to complete. You (or parent(s) of a child/ren) will receive confirmation of test results by letter.

No islet autoantibody markers*:*

If we do not find islet autoantibodies, this is a negative result. Testing negative for islet autoantibodies **does not mean you (or your child) will never get type 1 diabetes**, but the chances are much lower than a positive result. It is still possible that you (or your child) could develop islet autoantibodies in the future. For this reason, we may invite you to take part in stage two sample follow up and ask you to sign a new consent form.

We measure islet autoantibodies each year for relatives aged under 21 years and every five years for 21 years and older.

One islet autoantibody marker:

If we find **one** islet autoantibody, this is a positive result. Testing positive for one islet autoantibody **does not mean that you (or your child) will go on to develop type 1 diabetes,** but you (or your child) are/is at slightly increased risk when compared to the general population. We will invite you (or your child) to take part in stage two follow up and ask you to sign a new consent form.

In stage 2 we follow relatives for all age groups who have one islet autoantibody marker.

Two or more islet autoantibody markers:

If we find **two or more** islet autoantibody markers present, this is also a positive result. Testing positive for two or more islet autoantibodies means that you (or your child) may be more likely to develop type 1 diabetes at some time in the future, when compared with other people who do not have these markers.

We will invite you (or your child) to take part in stage two follow up and ask you to sign a new consent form.

You can read more about Stage 2 yearly follow up on page 11.

Further Information

How will my information be kept confidential?

- All information that is collected about you during the study will be kept strictly confidential.
- Any information that leaves the co-ordinating centre will have your name and address removed so that you cannot be recognised from it.
- We will ask your permission to contact your GP to inform him/her that you are taking part in this study.

What will happen to any samples we give?

- Any samples we collect from you and your family are stored using a unique code which can only be traced back to yourselves via a secure database with restricted access.
- Samples will be used for research into type 1 diabetes and related autoimmune conditions e.g. Thyroid and Coeliac disease.
- Samples will be tested for antibodies e.g. COVID-19.
- Some samples we collect will be sent coded and anonymised to national and international research laboratories for further measurement. Any results and correspondence will be made using this code and strict data protection guidelines will be adhered to.
- Samples will be kept long term to allow us to go back to them in the future should new techniques/research questions be developed.
- Should you wish to do so, you can request that your samples be destroyed at any time.

General Data Protection Regulation (GDPR) Information:

The University of Bristol is the sponsor for this study based in Bristol, United Kingdom. We will be using information from you in order to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. The University of Bristol will keep identifiable information about you for 15 years after the study has finished.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally-identifiable information possible.

You can find out more about how we use your information under the GDPR data protection statement on our website:

www.bristol.ac.uk/translational-health-sciences/box-study

NHS hospital sites recruiting new entry participants to the BOX family study will collect information from you for this research study in accordance with our instructions. They will use your name, contact details and date of birth to contact you about the research study, and make sure that relevant information about the study is recorded for your care, and to oversee the quality of the study. Individuals from the University of Bristol and regulatory organisations may look at your anonymised medical and research records to check the accuracy of the research study. Your local BOX site will pass these details to the University of Bristol along with the information collected from you.

The only people in the University of Bristol who will have access to information that identifies you will be people who need to contact you to provide study updates or audit the data collection process. The people who analyse the information will not be able to identify you and will not be able to find out your name, contact details or date of birth.

What will happen to the results of the research study?

- Results from the research are published regularly in peer reviewed scientific journals.
- A newsletter is circulated to all participants from time to time giving details of any published work. Participants providing an email address, will be subscribed to our electronic mailing list. This list is hosted by a third-party digital platform called mailchimp https://mailchimp.com/ compliant with data protection regulations. An unsubscribe or opt option is given with every email sent from the mailing list.

Introduction to Stage 2 Yearly Follow-up

Studying follow up samples **over time** helps us to identify important immune changes and learn more about the pathways which may lead to diagnosis of type 1 diabetes.

All children and young people up to the age of 21 years are invited to join Stage 2 and volunteer yearly samples. Adults are selected for invitation from islet autoantibody results in Stage 1.

We continue to give islet autoantibody results and explain their meaning if you have chosen to receive them.

Stage 2: Oral glucose tolerance test (OGTT) or HbA1c

People with two or more islet autoantibodies who are at increased risk of developing type 1 diabetes in the future, can choose to have an additional test called an oral glucose tolerance Test (OGTT). In this test, blood samples are taken to measure how well the insulin producing cells in the pancreas are working after they have been given a sugary (glucose) liquid to drink. Alternatively, a HbA1c test can be chosen to measure blood glucose control over the last three months.

If you (or your child) receive an invitation to Stage 2, we will provide further information and ask you to sign a new consent form. You would be under no obligation to take part in Stage two.

What if there is a problem?

It is highly unlikely that anything will go wrong. If taking part in this research project harms you, there are no special compensation arrangements. If you are harmed due to someone's negligence, then you may have grounds for a legal action, but you may have to pay your legal costs. Regardless of this, if you wish to complain, or have any concerns about any aspect of the way you have been approached or treated during this study please contact Professor Kathleen Gillespie, Telephone 0117 4147899 or by writing to our freepost address given at the end of this leaflet.

If you remain unhappy and wish to complain formally, you can do this through the NHS Complaints Procedure Patient Advice and Liaison Services (PALS) their web address is:

https://www.nhs.uk/nhs-services/hospitals/what-is-pals-patient-advice-and-liaison-service/

You can also ask your GP surgery, hospital, or phone NHS 111 for details of your nearest PALS.

Who is organising and funding BOX?

BOX was initially started in 1985 by a collaboration between all the type 1 diabetes specialists in the former Oxford Regional Health Authority and a research team at St Bartholomew's Hospital, London. The research team moved to Bristol in 1997, but the name and organisational structure of the study is unchanged.

The BOX Study is supported primarily by Diabetes UK but other funding organisations have funded various aspects of the work. There are no commercial interests involved in the study.

Who has reviewed the study?

The BOX Study has been reviewed and approved by South Central - Oxford C Research Ethics Committee.

Who should I talk to if I have any questions or concerns?

You are encouraged to ask all questions which come to your mind about the study. You can contact us using the details below.

Thank you once again for reading this information and taking the time to consider taking part.

CONTACT US:

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