A Randomized Controlled Trial of Gentle Touch/Early Massage with a New Wash and Lotion Regimen for Improved Skin Barrier Strength, Parental Bonding, and Physical Development in Newborn Babies: The Barrier Optimizing skincare for Newborn Development (BOND) trial

PHASE 2

Research team: Simon Danby, Shatha Shibib, Tina Lavender and Michael Cork

We would like to invite you to take part in our research study. Before you decide we would like you to understand why the research is being done and what it would involve for you and your baby. Please feel free to discuss this information with your family, a healthcare professional or a study team member. Thank you for taking the time to read this document.

What are we trying to find out?

Following birth our skin takes a number of years to mature before it gives us the protection we need from our environment. The way we care for our baby's skin has an impact on this process. For example harsh wash products can irritate sensitive baby skin and potentially delay its development. On the other hand some mild products can support normal development whilst effectively cleansing the skin. In addition to the direct effects of skincare practices on the skin, the interaction between the parent (or legal guardian) and their baby during the use of skincare products can be very rewarding, promote bonding and potentially help the development of the baby.

We would like to assess the effects of three different skincare regimens to determine both their direct effects on development of the skin and the indirect effects on the parent-baby bond and the development of the baby. To do this we are looking to recruit 120 newborn babies.

Why have I been invited?

You are being invited to join because you will shortly become, or have just become, a mother who lives in the local Sheffield community. All healthy newborn babies born after 37 weeks of pregnancy at the Jessop Wing Maternity Hospital are eligible to take part. We are recruiting mothers and their babies specifically at this early stage because the currently developed scales for assessing parent-baby interaction are only validated in mothers.

Do I have to take part?

No. It is up to you whether you and your baby would like to take part. Consider the information in this sheet to help you decide, and feel free to contact us if you have any questions. If you decide to take part you are free to withdraw at any time, without giving a reason. Your decision will not affect the standard of care that you or your baby receives, now or in the future.

What will happen if I take part?

During your stay on the maternity ward a member of our team will visit you to discuss the study. If you agree to join the study you will be asked to sign a consent form on behalf of you and your baby, and you will be given a copy of this information sheet and the consent form to keep. We will then ask you a series of questions about your, and your baby's, medical background so that we can determine your suitability for the study against the pre-determined inclusion and exclusion criteria.

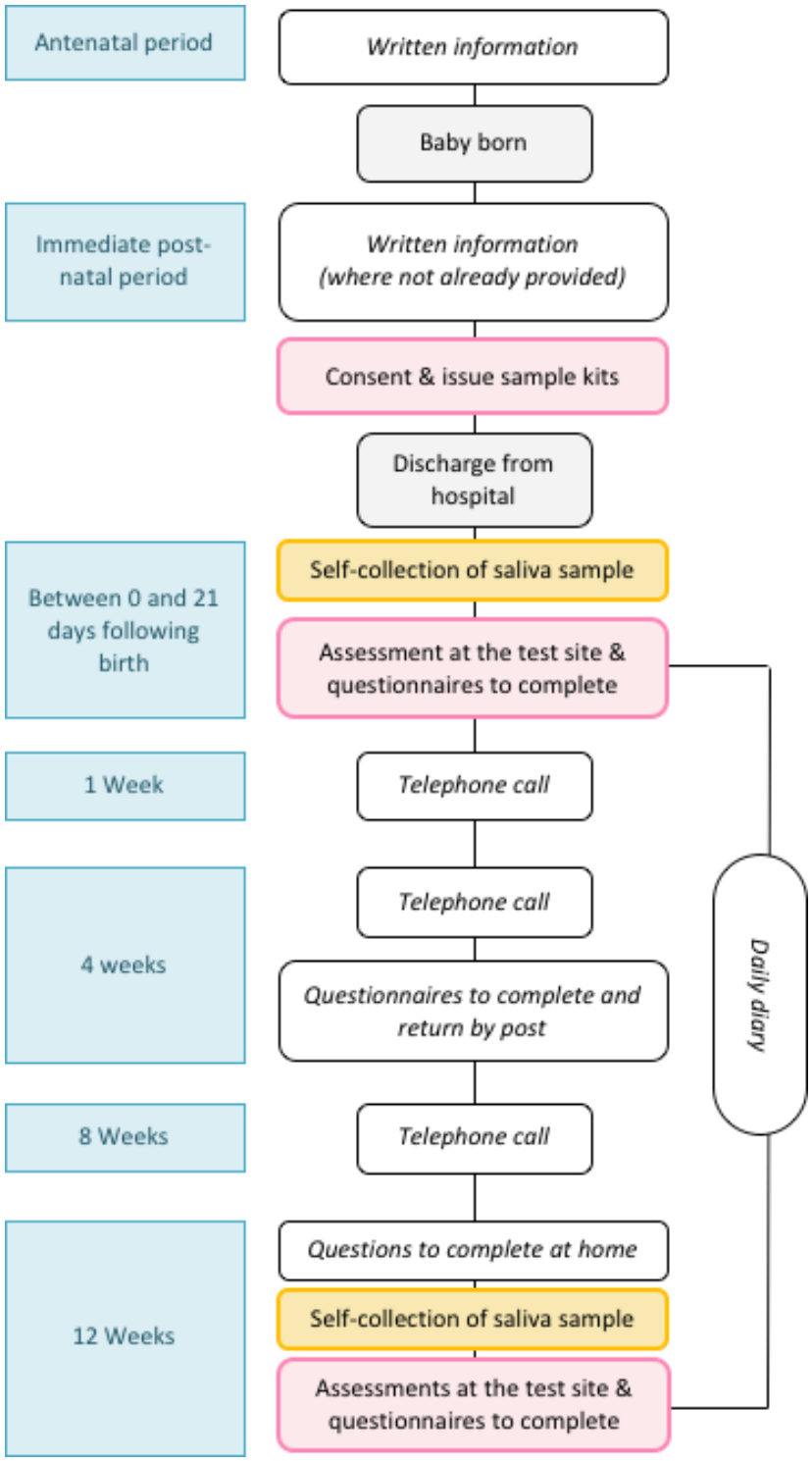
If you and your baby are selected to be in this study you'll be expected to follow 1 of 3 skincare routines for your baby each lasting 3 months. You will not be able to choose the routine, because this will be determined at random using randomisation lists. The routines involve the use of a cosmetic Baby Wash and Shampoo with or without a Baby Lotion, some of which are currently not marketed.

The identity of the products will be concealed so that the trial is conducted fairly. To prevent the study investigators from finding out the identity of the products you have been selected to test, a designated researcher outside the study team will issue them to you (according to the randomisation list) and you will be asked not to reveal any details of the products provided to the study team. At the end of the study you will be expected to return any unused products as well as the used empty containers.

So that we have a record of your progress and experiences using the selected skincare routine we will ask you to keep a daily diary.

During the study, you will need to attend 2 sessions at our skin research rooms at the Royal Hallamshire Hospital. The first will be between 0 and 21 days following your baby's birth and the

Participant pathway:



second 3 months after the first session. We can arrange your first visit when you consent to take part or we can contact you at home once you've settled in. We will arrange taxi transfers to and from the hospital for you (at no cost to you). For all sessions we will arrange a convenient time with you in advance. The products will be provided during your first study visit.

During the 2 sessions in the skin research rooms we will perform a number of harmless procedures on your baby's skin and ask you to complete a series of short questionnaires (see below). Each session should last approximately 2 hours.

First thing in the morning before your first and second study visit you will be asked to collect a saliva sample from yourself (not your baby). This needs to be done when you first wake and again 30 minutes later. We will provide full instructions and all of the equipment required. The procedure is straightforward and you can call us anytime if you have any questions about it. We will contact you by phone call or text the day before you're required to collect it to remind you.

We will also arrange to call you approximately 1 week, 4 weeks and 8 weeks after your first visit to keep in touch and see how you and your baby are managing with the study. These calls should only take about 5 minutes unless you have any issues relating to the trial to tell us about. At 4 weeks there will also be a series of short questionnaires to complete and return by post (prepaid envelope provided).

Will I need to change the way I look after my baby's skin?

Yes, you will need to follow the skin care routine selected for your baby, involving the use of cosmetic skincare products. The current standard of care advocated by healthcare professionals is to use cotton wool and water to cleanse your baby's skin, however this recommendation is not based upon evidence and research suggests that cosmetic products are commonly used. If you choose to take part in this study you will be required to use the products provided to care for your baby's skin. It is important that you do not switch your baby's products during the study or use any other products on your baby's hair or entire body, except for the study product(s) provided. You can use topical products for care of umbilicus and circumcision if applicable and baby nappy area products on your baby's buttocks/nappy area as needed.

It is also important that you do not introduce any new fragrances on your baby (e.g. cleansers, lotions, perfumes, etc.), or in the household environment (e.g. room fresheners, cleansing agents, laundry detergents, etc.) for the duration of the study. Excessive sun exposure (more than 30 minutes) without protective clothing, especially during the peak periods of 11am to 2pm, should be avoided.

What procedures will we do?

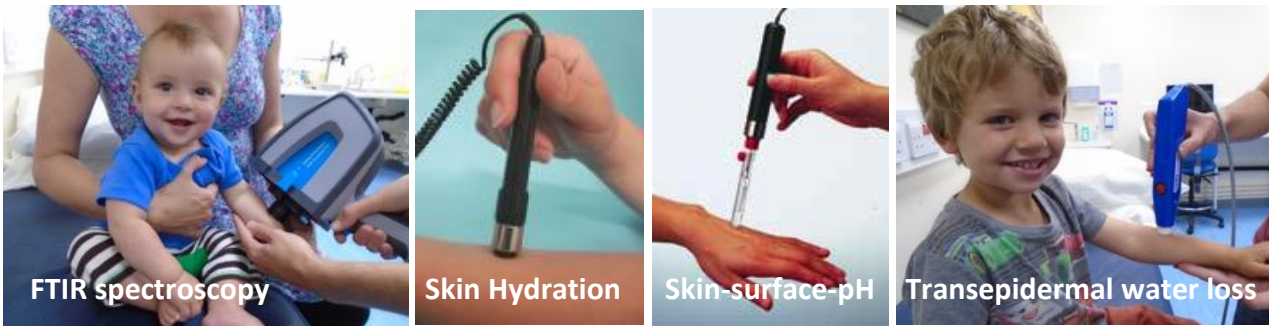
We will collect information in several ways. None of the assessments will harm your baby:

1. *Visual assessment*. This will involve looking at the condition of your baby's skin. If your baby shows signs of redness or dryness, this will involve grading how severe it is.

2. *FTIR Spectroscopy*. This will involve placing the assessment tool briefly in contact with your baby's skin on the arm, elbow flexure and thigh. The tool uses the same light as found in your TV remote control, and gathers information on skin structure. We will wipe the skin with a mild baby wipe prior to collecting some measurements.

3. *Skin Hydration, Transepidermal Water Loss (skin barrier strength) and skin-surface-pH*. This will involve placing probes briefly in contact with your baby's skin on the arm, elbow flexure and thigh.

The measurements tell us how your baby's skin is developing. The procedures can be compared to holding something like a microphone briefly to the surface of your skin, and will not cause any pain or discomfort.



4. *Baby measurements.* The research midwife will measure the weight and length of your baby and the circumference of their head.

5. *Microbial swab*. We will simply rub your (both hands and forearms) and your baby's (legs and forearms) skin gently with a wet sterile swab to collect the samples. These will be sent to another organisation for extraction of the microbial DNA and analysis of the types of microbes found on your and your baby's skin.

6. *Saliva sample*. Collected by yourself as detailed above in the morning before each visit to our research rooms. These samples will be used to analyse your cortisol levels. Cortisol is a hormone, the levels of which are linked to your mood. Full instructions will be provided along with all of the apparatus required to collect the samples. Once collected the samples will require storage in your home freezer. If you do not own a freezer please notify the researcher, as it may not be possible to collect this sample. This will not affect your ability to participate in this study.

7. *Infant CARE Index*. For this assessment the study team will need to record a short (3-5 minutes) video of play interaction between yourself and your baby (conducted before and after using the products). The videos will be sent to an expert clinician in mother-baby interaction for analysis.

8. *Ages and stages questionnaires (ASQ-3 and ASQ:SE-2)*. In the days leading up to your final appointment, after using the products for twelve weeks, we will send you these short questionnaires to complete at home. They assess your baby's physical and social-emotional development, and will involve undertaking some short play activities with your baby.

9. *Other Questionnaires*. We will ask you to complete 4 short questionnaires about your own feelings, your relationship with your baby, and your experiences using the study products at both assessment sessions. We will also send you these questionnaires to complete and return by post at 4 weeks. With the exception of the questionnaire on the products, the questionnaires have been validated previously through clinical research.

More detailed written descriptions of the skin tests are available upon request.

What will happen if my child develops a skin problem whilst taking part?

If your child develops a skin problem during this trial you should contact us straight away, and where necessary we can arrange for you to see the study dermatologist. If you have any other health concerns about yourself or your baby you should seek medical attention and advice from your usual GP. We can contact your GP to notify them that you are taking part in this trial if you would like us to do so. The GP/participating NHS organisations may share medical information as required.

Authorised persons from the Sheffield Teaching Hospitals NHS Foundation Trust, the Sponsor, the ethics committee and/or regulatory authorities may have access to these records, however, your name or your baby's name will not be disclosed outside of the hospital. Taking part in this study will not affect your access to your normal healthcare services. All that we ask is that you keep us notified about any changes to your health and medication.

What are the possible benefits of taking part?

There are no known direct benefits to you or your baby for taking part in this study. However, by taking part you will help us to better understand which skincare routines provide the best support for normal skin development and whether such routines can improve the parent-baby bond and early development of babies.

In acknowledgement of the time you have given up we will give each participant up to £100 in gift vouchers. These vouchers will be provided at set points during the study: £20 upon completion of the first visit to the study room, £20 for return of the 4 week questionnaires, £20 for return of the 3 month questionnaires, £20 for returning the completed 3 month diary, and £20 for completion of the second/final visit.

There are no costs to you for being in the study. The study products and study procedures are provided to you and your baby at no charge, and we will arrange and pay for all taxi transfers.

Are there any risks?

Any time you try a new skincare product; there is the potential for side effects. Possible reactions to the test products can include: mild burning/stinging, dryness/tightness, slight redness, itching, rash or other reaction. These symptoms are usually temporary but could persist for a long time. All of the side effects may not be known. There may be rare and unknown side effects, including reactions that may be life threatening. The treatment or procedures may involve risks to you or your baby (or to the embryo or fetus, if you are or become pregnant) that are currently unforeseeable. The risks are no greater than when you try a different skincare product at home. All of the ingredients in this trial's skincare products are generally regarded as safe for use in humans.

Sometimes people have allergic reactions to ingredients that are in cosmetic/test products. If your infant has any known allergies or sensitivities to common topical products (including cleansers), toiletries or their components, or adhesives, you should not take part in this study. It is very important to tell the investigator immediately if there are any known allergies or if your infant begins to have an allergic reaction. Some things that happen during an allergic reaction include a rash over the whole body; shortness of breath; wheezing; sudden drop in blood pressure; swelling around the mouth, throat, or eyes; fast pulse; or sweating. If your infant has any of these side effects, notify your doctor immediately. Please tell the study investigator or study staff if your infant has had any of the side effects listed above.

If it is determined that an allergic reaction has occurred, you can expect an allergic reaction to the material if your infant encounters it at a later date. Whenever possible, you will be told the name of the product/ingredient that caused the allergic reaction so that your infant may avoid contact with it in the future.

What if there are new findings on the test products?

Significant new findings developed during the course of the research that may relate to your willingness to continue participation will be provided to you.

What if I change my mind about taking part once I'm enrolled?

It is your choice to take part in the study or not. You are free to withdraw at any time without penalty or loss of benefits to which you or your baby are otherwise entitled.

The investigator or the sponsor may take you/your baby out of the study without your permission, at any time, for the following reasons: If you do not follow the investigator's instructions; If we find out you or your baby should not be in the study; If the study is stopped; or if it becomes harmful to your/your baby's health.

If you leave the study or if you are taken out of the study, you may be asked to return for a final visit to have some end of study evaluations or procedures. If you leave the study, no more information about you/your baby will be collected for this study. However, all of the information you gave us before you left the study will still be used.

Are there other options to participating in the study?

Since this study is for research only, the only other choice would be not to be in the study. You would then be free to use the cosmetic products of your choice on your baby.

What will happen to any samples I give?

Your samples will be treated as a gift. They will be kept in a secure location within The University of Sheffield Medical School. Access to your samples, which will not be labeled with personal identifiable information, will be restricted to authorised designees on the study only. Your saliva samples will be analysed during the course of this study, and subsequently disposed of by incineration. Your skin swab samples will be stored for up to 2 years following the end of this study at the University of Sheffield before being sent to a third party organization for extraction of the microbial DNA (all other material discarded by incineration). The microbial DNA will be stored for up to 25 years for the purpose of microbiome analysis under the custodianship of RTL Genomics, Inc. http://rtlgenomics.com/. We will not share your personal identifiable information with these organizations. Should you choose to withdraw from the study we will destroy your samples upon request.

Will my taking part in the study be kept confidential?

Yes. We will follow ethical and legal practice and all information about you and your baby will be kept strictly confidential. Any information about you or your baby that leaves the hospital will have the name and address deleted, so that you and your baby cannot be recognised by it. This includes data that are transmitted electronically. Each of you will be allocated a unique study number, which will be used for recording demographic and study data. All electronic data will be stored on a secure server, managed by the University of Sheffield, and will be identifiable only by the unique study number. Personal contact details will be recorded separately on paper and stored in a locked filing cabinet in a locked research office. Any information included in written reports/presentations will not identify you or your baby by name. Where necessary we will use a false name. Only the members of the research team will have access to you or your baby's personal contact details.

If you consent to take part in the study with your baby, some parts of your medical record, your baby's medical record, and the data collected for the study may be looked at by authorised persons from the Sheffield Teaching Hospitals NHS Foundation Trust, the Sponsor, the ethics committee and/or regulatory authorities to check that the study is being carried out correctly. Your name, or your baby's name however, will not be disclosed outside of the hospital.

The monitor(s), the auditor(s), and regulatory authority(ies) may be granted direct access to you and your baby's original medical records for verification of clinical trial procedures and/or data, without violating confidentiality, to the extent permitted by the applicable laws and regulations. By signing the attached Consent Form, you authorize such access.

Who is the Data Controller?

The study Sponsor, Johnson & Johnson, will act as the Data Controller for this study. This means that Johnson & Johnson is responsible for looking after your information and using it properly. We will collect information from you in order to conduct this study in accordance with the Sponsor's instructions.

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 by contacting the Sponsor via the study investigators or by emailing the Data Protection Officer (see email address below).

We will keep your name, and contact details confidential and will not pass this information to the Sponsor (Johnson & Johnson). We will use this information as needed, 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. Certain individuals from Johnson & Johnson and regulatory organisations may look at your medical and research records to check the accuracy of the research study. Johnson & Johnson will only receive information without any identifying information. The people who analyse the information will not be able to identify you and will not be able to find out your name, or contact details.

Johnson & Johnson will keep Identifiable information about you for the purpose of the study for 25 years after the study has finished. This information will be held by Sheffield Teaching Hospitals NHS Foundation Trust, who will not share your personal identifiable information with Johnson & Johnson.

If you wish to raise a complaint on how we or the Sponsor have handled your personal data, you can contact the Data Protection Officer who will investigate the matter. If you are not satisfied with our response or believe we are processing your personal data in a way that is not lawful you can complain to the Information Commissioner's Office (ICO).

You can contact the Data Protection Officer at emeaprivacy@its.jnj.com

What will happen to the results of the research study?

We may use information from the study to write scientific reports but they will not include any information that makes it possible for you to be identified.

A description of this clinical trial will be available on http://www.ClinicalTrials.gov, as required by U.S. Law. This website will not include information that can identify you. You can search this website at any time. When the study has ended you will be able to find a summary of the study findings here.

Who is organising and funding the research?

This study has been designed and organised by researchers at The University of Sheffield, The University of Manchester and the Sponsor. The study is sponsored by Johnson & Johnson, who have also provided the funding to undertake this trial. The study investigator and/or institution is receiving payment from the sponsor to perform the study and/or to recruit participants.

The study investigator may have financial arrangements with the sponsor beyond the payment for the fees related to the study, and you may inquire as to those arrangements.

Who has reviewed the study?

All research in the NHS is looked at by an independent group of people, called a Research Ethics Committee, to protect your and your baby's safety, rights, wellbeing and dignity. This study has been reviewed and given a favourable opinion by Yorkshire & The Humber - Sheffield Research Ethics Committee (Ref: 17/YH/0083), and Sheffield Teaching Hospitals NHS Trust (Ref: STH 19623).

What if there is a problem?

If you have a concern about any aspect of this study, you should speak to the researchers who will do their best to answer your questions (Tel: 07834392439). If you remain unhappy and wish to complain formally, you can do this by contacting the Patient Services Team (The Royal Hallamshire Hospital, Glossop Road, Sheffield, S10 2JF; telephone 0114 271 2400).

In the event that something does go wrong and you are harmed during the research due to someone's negligence then you may have grounds for legal action and compensation, but you may have to pay your legal costs. The normal National Health Service complaints mechanisms will still be available to you.

Unreimbursed medical expenses not covered by insurance or other third party coverage will be reimbursed by the sponsor for medical treatment of an injury that, in the opinion of the study doctor and the sponsor, is directly caused by the study drug/investigational product or by procedures required by the study protocol which would not have been performed as part of your regular medical care.

What next?

If you would like to take part please contact:

BOND Research Midwife: XXX

Contact Number: XXX

To know more about the study or discuss anything in this information sheet please contact the study team:

Sheffield Dermatology Research, Department of Infection, Immunity & Cardiovascular Disease,
The University of Sheffield Medical School, Beech Hill Road, Sheffield S10 2RX.
Telephone: XXX,
Email: BOND@sheffield.ac.uk,
Website www.sheffield.ac.uk/iicd/dermatology

Thank you for reading this and for considering taking part in the study.

The Barrier Optimizing skincare for Newborn Development (BOND) trial

PHASE 2

Research team: Simon Danby, Shatha Shibib, Tina Lavender and Michael Cork

Participant Identification Number for this study: _____

Please initial box

1. I confirm that I have read the information sheet dated 07/11/18 (version 5) for the above study. I have had the opportunity to consider the information, ask questions and I have had these answered satisfactorily. ☐

2. I give permission for my baby and I to undergo the procedures listed in this document. ☐

3. I understand that my and my baby's participation are voluntary and that we are free to withdraw at any time without giving any reason, without my, or my baby's, medical care or legal rights being affected. Refusal to participate will involve no penalty or loss of benefits to which my baby and I are otherwise entitled. If I withdraw midway through the study, or I lose the capacity to reaffirm my consent, I give permission for my anonymised study data / samples to be retained and used by the study team. ☐

4. I understand that relevant sections of my, and my baby's study records and medical notes may be looked at by individuals from the NHS Trust, the study team, or by regulatory authorities where it is relevant to my taking part in this research. I give permission for these individuals to have access to my, and my baby's, records. ☐

5. I understand that the anonymised information collected about me and my baby may be used to support other research in the future, and may be shared with other researchers. ☐

6. I agree to my General Practitioner being informed of my participation in the study. ☐

7. I agree to me and my baby being videotaped during a short play activity for the purposes of the Infant CARE Index assessment. ☐

8. I understand that the short video of myself and my baby will be sent via secure encrypted electronic delivery to an Infant Care Index Expert Grader for analysis, that they will not be provided with my or my baby's name, address or date of birth, and that the film will be destroyed after grading. ☐

9. I agree to provide 4 saliva samples, 2 before the start of the skin care routine and 2 at the end, so that my cortisol levels can be determined. I understand that the samples may be stored for up to 2 years following the end of the study to allow for analysis, after which time any remaining sample will be disposed of. ☐

10. I give permission for my and my baby's anonymised skin swabs to be sent to a third party organisation chosen by the study team to (1) extract the microbial DNA and (2) dispose of the remaining sample. I also give my permission for the extracted microbial DNA to be sent to RTL Genomics, Inc. who will act as custodian of the anonymised samples. I understand that the RTL Genomics will store the microbial DNA samples for up to 25 years for the purpose of conducting further research on microbial diversity, after which time the samples will be disposed of. ☐

11. I agree to my anonymised study records being retained by the study sponsor (Johnson & Johnson) after the end of the study. ☐

12. I agree to my and my baby's personal information (e.g. Name, Address, Date of Birth and phone number) being kept securely by the study team for up to 5 years following the end of the study so that I may be contacted again about further research studies related to BOND. ☐

13. I, and my baby, agree to take part in the above study. ☐

Name of Participant	Date	Signature
Name of Person taking consent	Date	Signature