How can I help to reduce healthcare associated infections?
Infection control is important to the well-being of our patients and for that reason we have infection control procedures in place. Keeping your hands clean is an effective way of preventing the spread of infections. We ask that you, and anyone visiting you, use the hand sanitiser available at the entrance to every ward before coming into and after leaving the ward. In some situations hands may need to be washed at the sink using soap and water rather than using the hand sanitiser. Staff will let you know if this is the case.

www.buckshealthcare.nhs.uk
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Patient information leaflet
If you want to read this leaflet in another language please ask your Midwife

Division of Women, Children & Sexual Health Services
Artificial ‘seeding’ at planned Caesarean Section

What is artificial ‘seeding’?
You are probably reading this leaflet because you have expressed interest in the process of artificial ‘seeding’ of babies at planned Caesarean Section (CS). We have developed this leaflet in response to an increase in questions from women and their families about the potential benefits of this new practice and to help you to decide whether this is a birth choice you wish to make.

There has been increasing media coverage and interest about the role that a newborn baby's ecosystem of 'good' gut bacteria (their 'microbiome) has in helping babies to develop their immune system. There is research to show that babies who are born by CS have slightly different gut bacteria to babies born vaginally, because when babies are born by CS they do not become 'colonised' with their mother’s 'good' vaginal bacteria. It has been suggested that this may be one reason why babies born by CS are slightly more likely to develop conditions such as asthma, allergic diseases and obesity than babies born vaginally.

Researchers have begun to ask whether there is a way of helping babies born by CS to gain the potential benefits of their mother’s vaginal bacteria. One idea has been for the mother to place a sterile muslin in her vagina for one hour before her CS to collect/absorb some of the mother’s bacteria. Then when the baby is born, the baby’s face, mouth and hands are wiped to transfer the bacteria.

Is there any research evidence for “seeding”?
A five-year study began in 2015, to see whether this is safe and beneficial. In 2016 a very small number of the babies in the study were tested and they were found to have gut bacteria that are more normally found in babies who have been born vaginally.

Useful Contact Numbers

Stoke Mandeville Hospital - 01296 316103
Wycombe Hospital - 01494 425520

We continually strive to improve the quality of information given to patients. If you have any comments or suggestions regarding this information booklet, please contact:

Head of Midwifery
Women & Children’s Division
Buckinghamshire Healthcare NHS Trust
Stoke Mandeville Hospital
Mandeville Road
Aylesbury
Buckinghamshire
HP21 8AL
The tests cost around £35. It involves the woman ordering a test pack, taking swabs from her vagina and rectum, and then sending them for processing by post.

If you test positive for GBS in pregnancy we would not be able to support artificial seeding.

**What if my baby becomes unwell?**
You will be given the routine information on the signs and symptoms that your baby may be becoming unwell, that is given to all women following birth and prior to discharge from hospital.

As for all mothers, it is very important that if your baby becomes unwell in the first days or weeks after birth, that you seek medical advice.

It is essential that you tell the Doctor’s/Health Professionals involved in your baby’s care that they had artificial seeding at birth, as this may help them with diagnosing and treating your baby.

**What else can I do to help develop my baby’s microbiome after birth?**
At present, artificial seeding is of unknown and only theoretical benefit. The most effective way of developing your baby’s microbiome is to breastfeed your baby exclusively. The first breastfeed should happen within the first hour or two after birth, and your baby should be exclusively breastfed for at least 6 months. The benefits of breastfeeding to a baby’s immune system are scientifically evidenced and we recommend that you continue for as long as possible.

Currently, there is not enough research evidence available to enable us to promote this procedure.

However, like any choice in pregnancy and childbirth, we may support women and families who opt to undertake artificial ‘seeding’ so long as we know that they are well informed about the risks and benefits involved.

**Who can receive artificial seeding?**

<table>
<thead>
<tr>
<th>Suitable</th>
<th>Not suitable</th>
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<tbody>
<tr>
<td>Women undergoing planned CS with singleton or multiple pregnancies from 37 weeks of pregnancy</td>
<td>Women whose waters have broken before their CS.</td>
</tr>
<tr>
<td></td>
<td>Women who have a high temperature, high heart rate, blood tests which suggest an infection, or women who feel generally unwell</td>
</tr>
<tr>
<td></td>
<td>Women who are known to carry Group B Strep, HIV, Hepatitis B, Hepatitis C or women who have active primary herpes.</td>
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**What do I need to do before my Caesarean Section?**
If you decide you would like artificial seeding at your planned CS, please arrange a telephone consultation with the Consultant Midwife to discuss the process. Your Community Midwife can help you organise this.

When you prepare your bag for coming into hospital for your CS, you will need to include a new, sealed pack of cotton muslin squares. A smaller size of muslin square may be easier for you to insert into your vagina. You will also need to pack a large, unopened, zip-lock sandwich bag in which to place the muslin.
What do I need to do on the day of my Caesarean Section?
Once you are admitted to the antenatal ward before your CS, the Midwife caring for you will help you prepare for the operation. This is the time that you should insert the muslin into your vagina. The Midwife caring for you can provide you with sterile water to moisten the muslin to help you insert it. When inserting the muslin, consider making a ‘concertina’ of the fabric, to allow maximum surface area for the vaginal flora.

It is recommended that the muslin stays in your vagina for one hour before your CS.

You are responsible for removing the muslin before the CS. You will need to place the muslin into a plastic bag, seal it and it will be labelled with your hospital patient sticker. Your birth partner will need to take the plastic bag containing the muslin to the operating theatre with you and must look after it carefully.

If you wish to remove the muslin removed before one hour has passed you can. If there is a change in yours or your baby’s condition, which means that the CS needs to be performed sooner, it may need to be removed before an hour has passed. This may reduce the amount of vaginal bacteria absorbed by the muslin.

It is important that we document in your notes that you have inserted a muslin for artificial seeding, and that it has been removed before your CS. Both you and the Midwife will be asked to sign in the notes.

What happens when my baby is born?
When your baby is born, he/she will be placed skin-to-skin on your chest providing they do not need any immediate care. Baby will be kept warm with towels. Either you or your birth partner wipes the muslin over your baby’s mouth, face, hands and body (in that order). The Midwife will then dispose of the muslin.

What about Group B Strep?
Group B Strep (GBS) is a normal gut flora. 1 in 4 women (25%) have Group B Strep in their vaginal flora. It can come and go, it is harmless and gives no symptoms to women. However, if babies receive GBS bacteria from their mothers, they can become severely unwell.

1:2 (50%) of babies born to mothers carrying GBS will become colonised with the bacteria during a vaginal birth. Without preventative antibiotics, 1 in 200 of these babies will develop severe GBS disease. Of the babies who develop severe GBS disease, about 1 in 10 of these babies may die.

For women who have planned CS, their babies only have a very small chance of becoming colonised with GBS. This is important because, in theory, the process of artificial seeding could introduce GBS bacteria to babies who would have otherwise avoided it. Therefore it is particularly important that women and their families consider this risk of introducing GBS bacteria very carefully if they chose to undertake artificial seeding.

Can I be tested for Group B Strep?
At the moment, as nationally, we do not offer a test for GBS in late pregnancy to identify those women who may pass on the GBS bacteria to their babies at birth.

However, women who are considering undertaking artificial seeding have the option of a private Enriched Culture Medium test at around 35 weeks of pregnancy. Opting for this may help give you extra information with which to weigh up the risks and benefits of artificial seeding.

http://gbss.org.uk/who-we-are/testing-for-gbs/which-test-for-gbs/