Premature, pre-labour rupture of membranes (PPROM)

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Very infrequently, a woman's waters break many weeks before her baby is due; it happens in about 1 in 50 pregnancies[1]. If you are unsure of anything or require further advice, please speak to your midwife or doctor.

Why does this happen?

Pre-term pre-labour rupture of the membranes (before 36 weeks) may occur spontaneously or follow amniocentesis, an episode of vaginal bleeding, or a severe bout of cystitis (bladder infection). It may also occur in mothers with twin or triplet pregnancies. However, it can happen for no clear reason.

What happens next?

Once the diagnosis has been confirmed by the midwife and doctor at the hospital, you are likely to be admitted to the hospital for a few days. This will involve taking a detailed history from you and, with your permission, a vaginal examination with a sterile speculum to take swabs to look for infection. Other tests to try to identify the reason will also be done, such as blood tests and a urine sample to look for infection.

Your baby's heartbeat will also be listened to. After 26 weeks we will do electronic recordings with a print out of the trace.

If your baby is born before 37 weeks, it can be difficult for the baby to open the air sacs in their lungs as by this stage in pregnancy the baby may not have made much surfactant. Surfactant coats the inside of the air sacs in the baby's lungs, making it easier for the baby to breathe. The natural surfactant production doesn't normally start until around 36-37 weeks; therefore, we recommend that mothers consider taking two doses of steroid tablets to help their baby produce more surfactant.

Steroids have been used widely over 25 years without evidence of harm. For more information about the use of steroids in pregnancy please see our Maternity information leaflet on Antenatal Steroids which is available on our website (http://www.royalberkshire.nhs.uk/Default.aspx.ShortcutID-712430.AccessLetter-M.htm).

There is an increased likelihood of premature birth if the waters break early. There is also a small chance of developing an infection when the waters have broken, which is called chorioamnionitis (an infection in the womb). For this reason we advise admission for a day or two as the risk is highest soon after the leak begins.

While you are an inpatient ,you will have your pulse and temperature checked every 4-6 hours, and you will be asked about your vaginal loss; for bleeding, discolouration or offensive smell. The baby's heartbeat will be listened to daily. The most 'dangerous' time for both infection, and early labour is within the first 48 hours after the waters break. If the labour does start naturally, it is very unlikely that anything can be done to stop it. We aim to minimise the risk of a mother developing chorioamnionitis by prescribing antibiotics for a week.

For mothers who do not develop infection and do not go into labour, it is usual to go home after this short hospital stay. You will be asked to attend the Day Assessment Unit (DAU) every week to check your bloods and for a vaginal swab to check for infection.

You will also have extra scans every fortnight to check your baby's growth, and have the scan reviewed by one of the doctors on DAU.
We ask you to monitor your temperature and vaginal loss, and contact us on the triage line (0118 322 7304) if there are any changes, so we can see you sooner than planned. You should continue with your planned schedule of antenatal care seeing your community midwife / GP / consultant as appropriate, but you will be given an appointment to be seen by one of the specialist doctors in the hospital antenatal clinic when you are 34 weeks pregnant, to discuss a potential plan for the birth of your baby (usually between 36 to 37 weeks). Some literature suggests that the baby's birth should be planned for around 34 weeks, but every case is different and there are several different issues that need to be considered with each individual woman / baby.

Timing, place and mode of birth

This very much depends on what happens soon after the waters break, as labour may follow naturally for a significant number of women, and others will develop signs of infection, which can be dangerous for both mother and baby.
It is usual for a member of the neonatal team to visit you on the antenatal ward during your stay to explain the management of a baby with preterm rupture of the membranes. If this is not offered, please don't hesitate to ask for this.
Very sadly, if the waters around a baby break before 23 weeks of pregnancy, it is very likely that the baby's lungs will not fully develop, and the air sacs (alveoli) will be fewer in number than normal. While there has been a lot of research to see if any steps can be taken to improve the outlook for the baby, there is no medication, nor any intervention that has been shown to make any difference, and some techniques carry the risk of introducing infections.
Mothers, whose waters break after 23 weeks, but before 27 weeks, providing it is safe to do so, will almost certainly be transferred to another hospital in the local area with the correct facilities and expertise in caring for very preterm babies. If it is not possible to transfer you to another hospital, your baby may be born at the Royal Berkshire Hospital and will be transferred soon after his or her birth, once their condition is stable.
If the baby is in a cephalic presentation (head first) the mother can be safely allowed to labour, and we recommend electronic monitoring of the baby's heartbeat. Breech babies, or any baby showing signs of distress or infection, are more likely to be delivered by Caesarean section after 26 weeks of pregnancy.

References

1. https://www.rcog.org.uk/en/guidelines-research-services/guidelines/gtg73/
2. https://www.nice.org.uk/guidance/ng25
3. NHS Premature labour and birth https://www.nhs.uk/pregnancy/labour-and-birth/signs-of-labour/premature-labour-and-birth/

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Please ask if you need this information in another language or format.

S Bisht, Consultant Obstetrician, March 2014. Reviewed: May 2021
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