

## Women's & Children's Health

### Patient Information Leaflet (PIL)

## Monitoring your baby's heartbeat in Labour



This leaflet is designed to give you information about how we care for your unborn baby while you are in labour. It will describe the benefits and disadvantages of different types of monitoring and aims to answer some of your questions.

## **Why monitor my baby's heartbeat?**

It is important for your Midwife to closely monitor your baby's heart beat in labour to check that your baby is coping with your contractions. When the womb contracts, it is normal for a baby's heart rate to dip down in response. This is normal and most babies cope without any problems. It is recommended that the heartbeat of all babies is monitored during labour because this provides some information to your Midwife or Doctor on how well he or she is coping. It is important to recognise that no kind of monitoring is perfect.

## **How is monitoring done?**

Your baby's heartbeat can be monitored either at regular intervals (intermittent listening) or continuously (electronic fetal monitoring). Every woman will be risk assessed on admission to labour ward to decide which type of monitoring is appropriate for you. You will be involved in any discussion around the need for monitoring of your baby's heartbeat.

Before starting any monitoring, your midwife will check your pulse rate as well as your baby's heart rate to make sure they can tell them apart.

### **Intermittent Auscultation**

If you are healthy, have had no previous medical problems and have had a straightforward pregnancy, this is the recommended method of monitoring your baby's heartbeat.

Your baby's heartbeat can be monitored using a Pinard stethoscope (a trumpet shaped device), which will enable the Midwife or Doctor to hear your baby's heartbeat through your abdomen. More commonly a Doppler (a battery-operated handheld electronic device), is used so that you can also listen to your baby's heartbeat.

They will listen every 15 minutes when you are in the first stage of labour, and every five minutes once we have determined you are in the second stage of labour until your baby is born. In hospital, there will be a second midwife who will perform 'fresh care' every hour to ensure that your baby remains within normal limits and can note any significant changes.

If you plan to have a home birth intermittent auscultation is the only type of fetal monitoring available. Once you are in established labour, the midwife will listen to your baby's heartbeat for a full minute directly after a contraction.

### **Benefits of intermittent auscultation**

- You can move around freely during your labour.
- When pregnancy has been straightforward, intermittent auscultation reduces the chance of unnecessary intervention.

## **Risks/disadvantages of intermittent auscultation**

- Very sudden changes in your baby's heart rate may not be detected. However, your midwife will listen directly after a contraction in line with NICE guidelines which should help us to recognise if your baby is struggling in any way.
- If there is concern about your baby's heart rate continuous electronic fetal monitoring is advised. This will mean you will need to be transferred into hospital, if you are labouring at home.

## **Electronic Fetal Monitoring (EFM)**

This form of monitoring means that your baby's heart rate is monitored electronically using a Cardiotocograph (CTG) machine which records your baby's heartbeat on a paper printout. This is referred to as the "CTG" or "trace."

This type of monitoring will be advised for any person with high risk or complex needs. Also, for those women where there have been concerns raised about their baby antenatally. These women will often have already been identified as Consultant Led Care and continued to see a consultant throughout their pregnancies.

Two flat round sensors will be held in place by elasticated belts against your abdomen. One of these sensors detects the frequency of the contractions whilst the other detects the baby's heartbeat. This is a painless procedure but sometimes restricts your mobility. The wires are long therefore you will still be able to move around, including sitting and standing, beside the monitor. There are cordless monitors called telemetry which you may request (if available).

A continuous CTG will monitor your baby's heartbeat throughout your labour. If everything appears normal and is low risk the doctor or midwife will advise you that we can revert to intermittent auscultation. Milton Keynes University Hospital has wireless CTG machines (telemetry) available to enable you to mobilise in labour. In some circumstances, telemetry monitoring can enable you to use the pool during labour, but you should be aware that this is not suitable for everyone. It may also not always work effectively enough in the pool to continue usage. Your midwife will be able to advise you.

Sometimes it can be difficult to monitor your baby's heartbeat with abdominal sensors. In this circumstance, the midwife may consider applying a fetal scalp clip (FSE) to the baby's head. This is done with your consent during a vaginal examination. A FSE connects to the CTG machine to monitor the baby's heartbeat accurately. Midwives and Obstetric Doctors are trained to read and interpret features on the CTG trace to assess how well your baby is coping with your labour.

The midwives and doctors look at different elements of the CTG trace. These include the usual rate of the fetal heart (FHR), the amount the FHR changes each time it beats, whether the FHR increases or decreases, and the frequency of contractions. These are all considered in relation to how the labour is progressing and any complications which may be present in pregnancy or labour.

If there are concerns these will be referred to a more senior midwife or doctor and further tests may be offered. It is normal for there to be changes in the pattern of the heartbeat, for example, when your baby is sleeping or moving around.

Sometimes the sound disappears or the monitor stops showing the heart rate on the paper or visual display. This is usually due to the baby moving away from the sensor and does not necessarily mean that there is a problem. Your midwife will quickly look to rectify this, or call for help if required.

National guidelines recommend that the CTG trace is assessed hourly by a second midwife or a doctor. This is called 'fresh eyes'. Your Midwife will invite another midwife or doctor into your room to do this every hour. The Midwife will explain this to you but please ask if you would like more information.

### **Benefits of EFM**

- You will be able to see quite clearly the pattern of your baby's heart rate.
- By continuously monitoring your baby's heart rate the midwife or doctor can detect any concerns.
- EFM can be reassuring for both you and your birth partner.
- EFM is very useful when there is an existing reason for the midwife or doctor to be concerned about your baby.

### **Risks/disadvantages of EFM**

Your freedom of movement may be limited with EFM. Whilst different positions can be adopted in labour, continual monitoring may mean that a limited amount of mobilisation is possible (unless telemetry is in use).

### **Why is continuous monitoring necessary?**

Continuous monitoring may be performed for a short period or for the whole of your labour. If you have had problems in your pregnancy and the midwife and doctor feel that extra review of your baby's heart beat is needed, they may recommend the use of a CTG in labour.

Care will be individualised to you and your baby's needs.

If you have a health problem such as:

- Diabetes.
- Problems with your heart or kidneys.

Any factors relating to your current or previous pregnancy, e.g.:

- Your pregnancy has lasted more than 42 weeks.
- You have a twin/triplet pregnancy.
- You have previously had a Caesarean section.
- Your baby is small or premature.
- Pre-eclampsia (high blood pressure).
- Infection.
- A reduced amount of fluid around the baby has been seen on scan.

Any factors relating to your labour; for example:

- If when listening to the baby's heartbeat, the midwife thinks there may be a problem, she/he will recommend continuous monitoring.
- You are having epidural analgesia (pain relief injected into your back).

- You have had bleeding from your vagina during or before labour.
- If your labour is induced (started artificially) you may need continuous monitoring.
- If your labour is strengthened with a drip (oxytocin).
- If baby passes meconium (opens bowels) before he/she is born we may recommend continuous monitoring.

There may be other reasons for recommending EFM or you may request that your baby is continuously monitored. Your midwife or doctor will discuss this with you.

### **What happens if a problem is suspected?**

If the CTG shows some changes with the baby's heartbeat, the situation will be reviewed and further action may be recommended. Sometimes simply changing your position can correct the problem. If not, a test called fetal blood sampling can be done which involves taking one or two drops of blood from your baby's scalp (through your vagina).

This blood is tested for oxygen levels to show how your baby is coping with labour. The test can take between 10 and 20 minutes. Sometimes the heart trace can make your midwife or doctor suspect that your baby is not coping well, when in fact they are fine. Fetal blood sampling helps to clarify this and may avoid you having an unnecessary caesarean section.

If the heart rate does not improve or the blood result shows that your baby is distressed the doctor may suggest immediate delivery of your baby (sometimes by caesarean section). There may be reasons why fetal blood sampling is not appropriate for you. Your Midwife or Doctor should discuss this with you.

### **Your choice**

Your Midwife or Doctor will talk to you about your choice of methods of monitoring your baby's heart rate and will explain any reasons as to why one method of monitoring may be preferred for your individual requirements.

### **Further information**

National Childbirth Trust  
phone: 08707 703 236  
website: [www.nct.org.uk](http://www.nct.org.uk)

NHS Choices

website: [www.nhs.uk](http://www.nhs.uk)

Royal College of Obstetricians and Gynaecologists

website: [www.rcog.org](http://www.rcog.org)

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## References

National Institute of Clinical Excellence (2017) Intrapartum Care: Care of healthy women and their babies during Childbirth NICE: London available at [www.nice.org.uk](http://www.nice.org.uk)

Royal College of Midwives. (2012). Intermittent auscultation (IA) Evidence Based Guidelines for Midwifery-Led Care in Labour. The Royal College of Midwives 2012. Available at: [www.rcm.org.uk](http://www.rcm.org.uk)

RCOG (2018) Improving fetal monitoring - [www.rcog.org.uk](http://www.rcog.org.uk)

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