



Patient Information

Monitoring your baby's heartbeat in Labour





This leaflet is designed to give you information about how we monitor your unborn baby while you are in labour. It will outline the options available, including the benefits and disadvantages of each one. The aim is to answer some of the questions you may have.

Why monitor my baby's heartbeat?

It is important for your Midwife and Obstetrician to closely monitor your baby's heart beat in labour to check how your baby is coping with your contractions. When the womb contracts, it can be normal for a baby's heart rate to temporarily drop in response and most babies cope without any problems. It is recommended that all baby's have their heartbeat monitored during labour to provide information about how well they are coping with labour of all babies is monitored during labour because this provides some information to your Midwife or Obstetrician on how well he or she is coping. It is important to recognise that every type of monitoring has its limitations.

How is monitoring done?

Your baby's heartbeat can be monitored either by listening at regular intervals with a handheld doppler (intermittent auscultation) or continuously (electronic fetal monitoring). Everyone has a risk assessment on admission to labour ward to decide which type of monitoring is the most appropriate for you. You will be involved in any discussion around monitoring of your baby's heartbeat.

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

Intermittent Auscultation

If you have no medical problems and have had a low-risk pregnancy, this is the recommended method of monitoring your baby's heartbeat during labour.

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

The midwife will listen at least every 15 minutes during the first stage of labour, and at least every five minutes in the second stage of labour until your baby is born. In hospital, 'fresh care' will be performed every hour with a second midwife to ensure that your baby's heart rate remains within normal limits and recognise any significant changes.

If you plan to have a home birth, intermittent auscultation is the only type of fetal monitoring available.



Benefits of intermittent auscultation

- You can move around freely during your labour.
- When pregnancy has been low risk, 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 immediately after a contraction which will help us to recognise if there are any changes to your baby's heart rate. It is important for the midwife to determine when your contraction has finished by placing their hand onto your abdomen. This is in line with national guidelines.
- If there is a concern about your baby's heart rate continuous electronic fetal monitoring will be recommended. If you are labouring at home you will need to be transferred into hospital.

Continuous Electronic Fetal Monitoring (CEFM)

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 recommended in labour for any high risk pregnancy or if any concerns have arisen during your antenatal or labour care.

Two flat round sensors will be held in place by elasticated belts against your abdomen. One of the sensors detects the frequency of your contractions whilst the other detects your baby's heartbeat. We have both wireless and wired sensors available. The wires are long therefore you will still be able to move around, including sitting and standing, beside the monitor

If you were recommended CEFM because of a concern with your baby's heartbeat and the CTG trace appears normal and you remain low risk the midwife or doctor will give you the option to revert to intermittent auscultation.

It can sometimes be difficult to monitor your baby's heartbeat with abdominal sensors, therefore the midwife may recommend applying a fetal scalp clip (FSE) to your baby's head with your consent. This is performed during a vaginal examination. The FSE lead connects to the CTG machine to monitor your baby's heartbeat directly.

Midwives and Obstetric Doctors are trained to read and interpret features on the CTG trace to help assess how well your baby is coping with your labour. These include the following: -

- Your baby's usual fetal heart rate (Baseline rate)
- The fluctuation of your baby's heart rate (Variability)
- Increases or decreases in the heart rate (Accelerations and decelerations)
- The frequency of your contractions.



Your midwife or doctor will observe all the above features along with your individual situation allowing us to determine the wellbeing of your baby.

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

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 Obstetrician. This is called 'fresh eyes'. The Midwife will explain this to you but please ask if you would like more information.

Benefits of CEFM

- You will be able to see the pattern of your baby's heart rate.
- By continuously monitoring your baby's heart rate the midwife or doctor can identify any concerns.
- CEFM can be reassuring for both you and your birth partner.
- CEFM is a very useful tool when there are already concerns about your baby.

Risks/disadvantages of EFM

Your movement may be limited with CEFM. Whilst different positions can be adopted in labour, continuous monitoring may mean that you have a limited amount of mobilisation (unless wireless sensors are in use).

When is continuous monitoring necessary?

Care will be individualised to you and your baby's needs. The following are some examples of when continuous monitoring will be recommended.

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 your baby passes meconium (opens bowels) before he/she is born.

There may be other reasons for recommending CEFM or you may request that your baby is continuously monitored. Your midwife or Obstetrician will discuss this with you and answer any of your questions.

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 the heart rate does not improve or shows that your baby is distressed the doctor may suggest immediate delivery of your baby (sometimes by caesarean section). This will be discussed with you so you can make an informed decision about your care.

Your choice

Your Midwife or Obstetrician 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

NHS Choices
website: www.nhs.uk

Royal College of Obstetricians and Gynaecologists
website: www.rcog.org

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References

National Institute of Clinical Excellence (2023) Intrapartum Care [NG235]: London
Available at www.nice.org.uk

National Institute of Clinical Excellence (2022) Fetal monitoring in labour [NG229]
Available at 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

COG (2018) Improving fetal monitoring - www.rcog.org.uk

We encourage patients to be involved in their care by:

1. Being part of the conversation and shared decision making
2. Asking questions if something is not clear
3. Speaking up if you have concerns

Checks are there to protect you and you can be part of them. Behave with respect and kindness towards healthcare professionals.

We ask for information about you so that you can receive proper care and treatment. This information remains confidential and is stored securely by the Trust in accordance with the provisions of the Data Protection Act 2018/GDPR. Further guidance can be found within our privacy notice found on our Trust website: www.mkuh.nhs.uk

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Date published: 05/03/2025
Date of review: 03/2028
Version No: 4

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