

# Fetal Heart Rate Monitoring in Labor



## What is fetal heart rate monitoring?

Fetal heart rate monitoring is used to check your baby's heart rate when you are in labor. Watching or listening to your baby's heart rate can tell your health care provider how well your baby is doing during labor. Your baby's heart rate may be checked continuously (all the time) or intermittently (off and on). Your provider will use a type of fetal stethoscope called a Doppler or an electronic fetal monitor that can also record your contractions.

## Why is fetal heart rate monitoring important?

When your uterus (womb) contracts, the blood flow to your baby slows down during the contraction. Most babies have enough oxygen stored up that they can handle normal labor contractions without any problems. Fetal heart rate monitoring does not tell us for sure that everything is okay, but if your baby is not getting enough oxygen, the fetal heart rate will show certain patterns that your health care provider will watch for.

## What types of fetal heart rate monitoring are available?

### Intermittent Fetal Heart Rate Monitoring:

A handheld fetal stethoscope, called a Doppler, is used to listen to your baby's heart rate for a couple of minutes every 5 to 30 minutes or so. How often your provider listens depends on what stage of labor you are in and if your provider is concerned about your baby. Your provider will listen while you are having a contraction and for a short time after the contraction ends.

### Continuous Fetal Heart Rate Monitoring:

#### *External Fetal Heart Rate Monitoring:*

Two plastic discs are placed on your stomach and held in place by straps. They will be connected to an electronic fetal heart rate monitor machine with a cord, or the monitor will be wireless. The monitor provides a continuous recording that shows your baby's heart rate, how often you are having contractions, and how long your contractions are lasting.

#### *Internal Fetal Heart Rate Monitoring:*

A small wire is placed through your cervix and attached just under the skin of your baby's scalp. The other end of the wire is attached to a sensor on your leg. This wire is a fetal scalp electrode (FSE). To insert the FSE, your membranes (bag of water) must be broken and your cervix must be open enough, usually at least 2 centimeters dilated.

## What are the benefits of intermittent fetal heart rate monitoring?

Intermittent monitoring allows you to move around freely while you are in labor. You can walk, shower, or bathe as much as you want. You can move into any position that is comfortable, which can help you cope with the pain of labor better. Intermittent monitoring may lower your chance of having a cesarean birth. If you are healthy and you have had a normal pregnancy, intermittent monitoring is safe for your baby.

## How does the safety of continuous and intermittent fetal heart rate monitoring compare?

A lot of research has been done to compare the safety of both methods of fetal heart rate monitoring. The chance of cerebral palsy or that your baby will die during labor or after birth is the same for both methods. Continuous monitoring slightly decreases the chance your baby will have seizures after birth. Intermittent monitoring significantly decreases the chance you will have a cesarean or assisted vaginal birth using forceps or a vacuum.



### Why would I need to have continuous fetal heart rate monitoring?

If you have a problem during your pregnancy or labor, you may need continuous fetal heart rate monitoring in order to watch your baby closely. These problems include:

- If you have risks during your pregnancy that suggest your baby may have a higher chance of not having enough oxygen during labor such as you are expecting more than one baby, have preeclampsia, or have diabetes.
- If your baby has extra risks like being smaller than expected, being born early (before 37 weeks of pregnancy), being born late (after 42 weeks of pregnancy), or not having enough amniotic fluid (water) around your baby.
- If you have extra risks during your labor like you are getting Pitocin, you have an epidural, you have large amounts of vaginal bleeding, your amniotic fluid (water) contains meconium (baby poop), your water has been broken for more than 24 hours, you develop a fever, or your baby's heartbeat shows signs that more oxygen or more time between contractions is needed.

### Why would I need to have internal fetal heart rate monitoring?

Internal monitors may be used if your provider has concerns about your baby's heart rate and the external monitor cannot record the fetal heart rate well.

### What will happen if my provider has concerns about my baby's heart rate while I am in labor?

If your provider has concerns about your baby's heart rate and you are using intermittent monitoring, your provider may recommend continuous monitoring. If you are using external monitoring, your provider may recommend changing to internal monitoring. Oftentimes, simple things like changing your position, giving you IV fluids, or giving you extra oxygen through a facemask may improve your baby's heart rate. If these methods do not help or the heart rate worsens, your provider may not feel it is safe for your baby to continue labor. In this case, a cesarean birth or assisted vaginal birth (using forceps or a vacuum) may be recommended.

### Do I have a choice of what type of fetal heart rate monitoring I have while I am in labor?

Different providers and birth settings may have different policies or preferences for what type of fetal heart rate monitoring is standardly used in labor. Most women in the United States have continuous monitoring. You should discuss your fetal heart rate monitoring options with your provider before you go into labor. Many providers will allow you to use intermittent monitoring if you do not have any risk factors and prefer this method.

#### For More Information

##### **BabyCenter: Fetal Monitoring**

[http://www.babycenter.com/0\\_fetal-monitoring\\_1451559.bc](http://www.babycenter.com/0_fetal-monitoring_1451559.bc)

##### **Johns Hopkins Medicine: External and Internal Heart Rate Monitoring of the Fetus**

[http://www.hopkinsmedicine.org/healthlibrary/test\\_procedures/gynecology/external\\_and\\_internal\\_heart\\_rate\\_monitoring\\_of\\_the\\_fetus\\_92,P07776/](http://www.hopkinsmedicine.org/healthlibrary/test_procedures/gynecology/external_and_internal_heart_rate_monitoring_of_the_fetus_92,P07776/)

##### **YouTube: Fetal Monitoring**

<https://www.youtube.com/watch?v=DvcDXvLCXAE>

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