Alberta Health Services

Department of Family Medicine

Fetal Monitoring Information Sheet

Fetal Monitoring is used to observe your baby's heart rate (or level of stress) during labour. Labour can be a time of stress for your baby. With each contraction, there is a temporary decrease in the amount of oxygen the baby receives.

Most babies go through labour without any problems, but there are some babies that cannot deal with the stress and can have quite serious issues. It is for this reason that is important to monitor the baby's heart rate during labour. Techniques have been developed to help the midwives/doctors decide which babies are able to manage the stress and which are having some difficulties that require intervention. Years of research have gone into developing these techniques.

Intermittent Auscultation:

Intermittent Auscultation is where a nurse or midwife will listen to your baby every 15- 30 minutes during the first part of labour and every five minutes while pushing. The nurse/midwife will wait for a labour pain and then listen to the baby's heart for about a minute. They will listen to the rate of the baby's heart and whether or not they hear increases or decreases in the heart rate.

Intermittent Auscultation allows for you to be able to walk around more, and if desired, take a shower/bath for pain relief. This technique also has shown to decrease the risks of interventions such as vacuum, forceps and caesarean sections.

For patients who have a low risk pregnancy, **Intermittent Auscultation** has been proven to have the same results for babies as if the nurse/midwife was to be listening non-stop.

Continuous Monitoring

Continuous Monitoring is a constant checking of the baby's heart rate through the use of a monitoring device. For most cases, a monitor is strapped around your belly (with a belt or a mesh band) which tracks the baby's heart rate at all times. If there are problems showing the heart rate or if the baby's heart rate is decreasing, an internal monitor may be used (a thin wire placed on the top of the baby's head). The internal monitor can increase the chance of infection, so is only used when necessary.

Continuous Monitoring is recommended for patients who have a pregnancy with certain complications and may have a baby less likely to be able to handle the stresses of labour.

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Pain Relief in Labour

To help better prepare you for labour and the pain relief options available to you at the Foothills Hospital, we've prepared this short guide.

Going Natural…

One of the most effective pain relief options is your own endorphins, which are naturally occurring narcotics (pain killers) produced when your body experiences pain. As pain increases, so does the production of endorphins.

Even with pain medication, it's important for you to stay as relaxed as possible between contractions and to breathe rhythmically through contractions in a non-panicked fashion. You can learn labour breathing techniques in prenatal classes. Along with correct breathing, you shouldn't worry about how much pain you may be in later. Remember, you'll produce more endorphins as pain intensifies. Just deal with one contraction at a time.

Hot showers or a hot bath may help to confuse the pain fibers and give you the sensation of less pain. All the birthing rooms at the Foothills Hospital have showers and one has a tub. (If you have ruptured membranes you shouldn't go in the tub unless you've discussed this with the attending physician.)

Studies show most women find labour more painful if they are lying down. Walking and/or sitting on a birthing ball or rocking chair are perceived as less painful. Try a variety of positions to see which works best for you. Even if you need continuous monitoring for a medical reason, you don't have to stay in bed.

Laughing Gas…

As labour proceeds, some women need more pain relief. One option is entonox, better known as laughing gas. Entonox is a gas and inhaling it lessens the sensation of pain. It works and is exhaled from the body from the body quickly. It has no adverse effect on the baby or labour. Some women experience nausea and dizziness with entonox, which disappears within one minute of stopping breathing the gas.

Morphine…

In the early phases of labour, morphine is the narcotic suggested by your physician if you request pain relief. This is given by injection into the muscle of your buttock and the effect of the medication lasts four to six hours. Side effects include drowsiness and nausea. Gravol is usually added to the injection to lessen nausea. If you are not in the active phase of labour, morphine can mask contractions to allow you some rest.

Morphine does have the potential to make the baby drowsy at birth and lazy with breathing efforts. This actually happens very rarely, as your physician will try to time the narcotic so it will wear off prior to delivery.

If the infant is affected, there is a medication that can be given to the newborn to reverse the effect of the narcotic. The medication does not cause any long term effects to the baby.

Fentanyl…

If you are in the more active phase of labour and request narcotic pain relief, fentanyl might be suggested. This is a short-acting narcotic administered intravenously. It acts and wears off quickly. The nurse can give it through your intravenous or it can be delivered through a pump that you control with a button. Fentanyl is unlikely to cause drowsiness or depressed breathing in your baby. If the baby is affected the narcotic can be easily reversed with and injection given to the baby. Women will often combine fentanyl with entonox.

Epidural…

This procedure is done by the anesthetist. The anesthetist places some local freezing in your lower back and inserts a needle into the space around your spine. A thin plastic tube is threaded through the needle into this space. The needle is removed and the tube is taped into place and then medication is inserted into the tube. The medication tends to freeze below your belly button down so pain is relieved.

Often women can still moved their legs and feel pressure with the epidural in place. The anesthetist always use the combination of drugs that allow for the “walking epidural”, but the reality is few women walk with the epidural other than to make trips to the washroom.

The epidural is usually hooked up to a pump so you can push a button if you require more pain relief. At times the anesthetist will “top up” (put more medication in the epidural) if you become too uncomfortable.

The advantage of the epidural is that it may completely remove the pain of contractions. Disadvantages include increased risk of bleeding or infection around the area of the tube and the possibility of a “wet tap” which can lead to a headache. Sometimes, when the epidural is initiated the baby’s heart rate drops. This heart rate drop usually recovers and has no adverse effect on the baby, but it does cause a lot of anxiety at the time. The nurse or doctor will often put an internal monitor clip on the baby to make sure we’re monitoring baby’s heart rate and not yours.

With an epidural it is more likely that a medication called syntocinon will need to be used to increase labour. It is also more common to need to have your membranes ruptured. While epidurals may impair labour, the opposite also occurs. Some women are so anxious about the pain of labour that their labour is slowed. An epidural may cause these women to relax enough to make progress better.

Epidurals have also been associated with reducing the ability to push, which can lengthen the pushing stage, and with an increased need to deliver the baby with vacuum or forceps and also, therefore, with a greater likelihood of an episiotomy. The vacuum does cause an increase in bruising on the baby’s head which leads to a greater likelihood of jaundice and lazy feeding.

Some women may have a longer more difficult labour for a variety of reasons. Some of these women are more likely to require help with the delivery in the form of vacuum, forceps and caesarean section. The epidural is the most common choice for pain relief these procedures.

Final word…

You do not have to make decisions about pain relief prior to labour. Your physicians just ask that you inform yourself of pain relief options. You can’t predict how you will respond to labour or how long your labour will be. When you are in labour, your nurse and physician will help you with decisions if you request their advice.