



## Pharmacological Pain Relief

### **Nitrous Oxide**

Nitrous oxide is a tasteless, odorless gas that is commonly given during dentistry procedures but is also useful as a form of pain relief in labour. It is given with oxygen by a mask you hold over your nose and mouth. You start inhaling the gas when you feel a contraction about to begin and continue to inhale slow deep breaths until the contraction ends. Nitrous oxide provides sensation of pleasure, relaxation, and can decrease anxiety levels. It also gives you something to focus your breathing on.

### **Pros**

1. Nitrous oxide can be used during all stages of labor, even after the birth, like for example, if you're having a perineal tear repaired. It can be stopped and started at any time.
2. It can be used to supplement other pain relief methods or it could be used to help you cope with your labour if you are waiting for an epidural.
3. Nitrous oxide is the least invasive pharmacological form of pain relief.
4. It is short acting and does not appear to affect the baby.
5. One of the things that people like about nitrous oxide during labor is that they can use the mask to control their own pain relief. You can choose when to put the mask on and when to take it off. Use of nitrous can increase the sense of perceived control which can reduce pain perception.
6. Nitrous oxide lets you keep up your strength and freedom of movement. It might create a sense of pleasure and relaxation. Also, it can ease anxiety and promote relaxation so the perception of pain is reduced.

### **Cons**

1. Requires repeated self-doses. You have to hold the mask to your face when you want the pain management. If you are tired or exhausted, you may or may not want to continue doing that.
2. It can also give promote a sense of detachment, like feeling as though you're not "really present". It may make some people feel dizzy, nauseous, or provoke a sense of claustrophobia from using the mask.

## **Opiates**

Opiates are a type of analgesic given to relieve pain. They are given in small doses and usually in the early stages of labour. Opiates do not take away the sensation of contractions, but rather take the “edge” off of the sensation and make labour more tolerable. Opiates used in early labour can also help promote sleep and rest. Use of opiates can also be considered if you are wanting to avoid use of epidural or are waiting for an epidural which is not immediately available.

Two opiate medications can be offered for pain during labour: morphine and fentanyl.

Morphine is a longer acting medication which lasts 4-6 hours. It is best used in a longer early labour to promote rest, relaxation, and sleep. Morphine is administered by injection into a large muscle and does not require IV access. Morphine requires a hospital triage visit as your midwife must consult with an obstetrician to give you this medication. You do not need to remain in the hospital after administration if there is no concern for the wellbeing of you or your baby.

Fentanyl is a shorter acting medication which lasts approximately one hour. Fentanyl can only be used while you are in hospital and in active labour. Your midwife must also consult the on-call obstetrician to receive orders in order to give you this medication. It requires your midwife to start an IV in order to administer. Your midwife also needs to monitor you and your baby closely for a period of time after administration. It is possible to receive multiple doses of fentanyl in order to provide adequate pain relief.

### **Pros**

1. Can be an effective form of pain relief for those wishing to avoid epidural, or if you are waiting to receive an epidural which is delayed.
2. Can promote sleep and rest in a longer early labour.
3. Most times, opioids are immediately available as their use does not require waiting for a nurse or anaesthesiologist.
4. Opiates do not reduce mobility – you are still free to move around and labour as you wish.

### **Cons**

1. Can cause depression of the baby’s central nervous and respiratory systems and cannot be given if baby’s heart rate pattern is atypical or abnormal during labour.
2. If given too close to delivery, opiates can decrease respiratory efforts of baby and result in baby not being able to breathe well on their own if opiates are given too close to delivery. They may also cause the baby to have decreased sucking/feeding behaviours and may impede breastfeeding in the first 12-24hrs after delivery.
3. Opiates can cause nausea, vomiting, flushing, dizziness, sedation, or itchiness of the skin for the labouring person.

## **Epidural**

An epidural is a method of anaesthesia pain relief using local anaesthetic and narcotic medication which is infused into the spine between the bones in your lower back. This blocks the sensation of pain which travels through the nerves coming out of the spinal cord.

### **Epidural Process**

If you request an epidural, an IV must be started in order to give you extra fluids if you do not already have an IV already. The results of your bloodwork from admission to the hospital must also be available for the anaesthesiologist to review. Your midwife will contact and consult the anaesthesiologist on call to come place the epidural.

You will be positioned either lying down on your side or sitting up for the anaesthesiologist to insert the epidural. The anaesthesiologist will first cleanse the area on your lower back. They will then use a local anaesthetic to numb the area where the epidural will be placed. They will insert the epidural needle between two bones in your spine and advance into the epidural space in your spine. A soft flexible tube called a catheter will be threaded through the needle, and then the needle is removed, leaving the catheter in place. A solution of freezing and narcotic medication is then injected through this catheter and then connected to a pump which will continue to administer the medication until you deliver your baby. Pain relief begins after a few contractions and takes full effect in approximately 15-20 minutes. Extra pain medication can be given as needed to maintain control of your pain.

As epidurals take away the sensation of pain in the lower part of your body, your legs will also become numb and heavy. It is for this reason it is necessary to remain in bed after the insertion of the epidural until the numbness is gone from your legs after you deliver your baby. You will still be able to move your upper body, legs, and move from side to side. As you are not able to feel when you need to urinate, a catheter will need to be inserted to drain your bladder.

### **Risks**

1. Common: itchiness of the skin (due to medication used), elevated temperature/fever, low blood pressure which in turn causes baby's heart rate to drop temporarily
2. Common: low back pain at site of insertion after the epidural is removed
3. Rare: infection at the site of the epidural
4. Rare: nerve damage which may be temporary, rarely can be permanent
5. Rare: 1/100 risk of getting a spinal headache

## Pros

1. Epidurals are the most effective pain control that can be offered in childbirth. It can provide almost complete pain relief with little or no effect on your baby.
2. Can provide complete relaxation of your body which may allow a baby who is not in an optimal position for birth to get into a better position.
3. Can allow for much needed rest and/or sleep – especially if you have been up for a prolonged period of time due to a slower-progressing labour.
4. If you have high blood pressure, can reduce your blood pressure, often negating the need for extra medication to do manage your blood pressure.
5. Epidurals do **NOT** increase the risk of requiring a Caesarian section.

## Cons

1. Epidurals are very good at taking away *pain* in labour, however, they do not take away the sensation of *pressure* you will feel as the baby moves down through your pelvis and when you are pushing. Sometimes this pressure is so intense it is perceived as painful.
2. Reduces mobility and freedom of movement.
3. May increase the need for forceps or vacuum to assist with the birth of the baby.
4. There is a small chance the epidural may not always work as expected (1 in 10 chance). Sometimes they initially work well and then wear off, work better on one side of your body than the other, or may be 'patchy'. Rarely an epidural may not be effective at all.
5. A small number of people cannot get an epidural due to certain health conditions such as abnormal curvature of the spine and certain blood clotting conditions.
6. An epidural may not be immediately available when requested. An anaesthesiologist must be available to insert the epidural. They may not be able to come right away if they are busy with another patient.