

Baths and Showers in Labor

By Penny Simkin

One of the safest and most effective forms of pain relief in labor is immersion in deep water or a warm shower. Hydrotherapy has been used for relaxation, healing, and pain relief for centuries, and today is widely used in physical therapy, sports medicine, and other health disciplines. It has been used in childbirth, however, only since the 1980s. Hydrotherapy in labor is becoming more popular because:

- Soaking in a tub or lingering in the shower is known to be soothing and relaxing for most people.
- Numerous studies have shown that when used correctly, it is safe, it reduces pain, and it frequently speeds labor. We sometimes call the bath “the midwife’s epidural.”
- The mother remains clearheaded and able to move about normally.
- These last advantages do not exist with the medications used for pain relief narcotics and anesthetics).
- Most women who plan to use water in labor want it for pain relief. Some would also like to give birth in the water, a practice that is restricted almost completely to out of hospital settings in North America, but is supported in many European hospitals.

How does a bath reduce pain and speed labor?

Here is the explanation based on research on the physiological effects of immersion in water, and on the studies of hydrotherapy in labor from the medical literature. My thanks to Michel Odent, MD, who has tirelessly explained the physiology of immersion in water, which I am summarizing here, along with his recommendations for safest and most effective use of the water in labor.

When a pregnant woman (or anyone who is not pregnant) sits in a deep warm bath, a series of physiological changes begins immediately. These alter hormone production and fluid distribution throughout the body. These are not observed when one sits in a few inches of water.

The body’s short term response to immersion:

- The warmth and buoyancy of the water bring about immediate relaxation and relief of pain. This lowers the production of stress hormones (such as adrenalin), which are known to work against oxytocin and to cause slowing of contractions.
- Even the anticipation of getting into the tub has some of the same psychological effects as actually getting in. Hearing the water run seems to have benefit.
- The body’s own oxytocin (which has very different effects than the chemical form used to induce labor) is now secreted by the pituitary gland in larger quantities.
- Labor progress increases with the increases in oxytocin, without an increase in pain.
- The woman also enjoys feelings of calm and well-being—caused by oxytocin in her brain.
- At the same time, the weight of the water (hydrostatic pressure) against her tissues presses tissue fluid from her arms, legs, and skin into her circulation, which markedly increases her blood volume, especially in her chest and heart.
- One obvious immediate demonstration of the increased fluid volume is that kidney action often speeds up, causing an urgent need to get out and go to the bathroom.
- These effects may be more pronounced in pregnant than non-pregnant women because of the increase in blood volume and tissue fluid that accompanies normal pregnancy.

Long-term effects of immersion in water:

- A secondary effect of the increased blood volume in the chest begins slowly, and takes a couple of hours to become obvious. The heart produces ANF (atrial natriuretic factor), which plays an important role in maintaining fluid balance.
- One effect of ANF is to slowly suppress the production of oxytocin. This effect takes a few hours and after that, labor progress tends to slow if the woman does not get out of the water. In fact, many women sense the change and get out of the bath. It is wise to ask the woman to get out if contractions seem to be slowing down (which may take 1 % hours or more; no one knows exactly how long this might take), even if she does not think of it herself.
 - Therefore, the bath frequently speeds labor for an hour or two, but is unlikely to continue that effect for hours. Pain relief does not last for hours, either (unless the pain relief is a side effect of a slow labor).

When should a woman get into the bath?

Because of the short-term effects, timing of the bath is important. If she gets in too early and stays for a long time, she will get no benefit; in fact, she may not progress into active labor. She should try to wait until 4 to 5 cm dilation or more. Then she is likely to experience immediate and profound pain relief, along with increased progress in dilation. She should use her other comfort measures, including the shower, before that, because the shower does not cause the release of ANF. Then she can save the bath for when she really needs it.

One possible exception is the situation where the woman is having a very long uncomfortable slow-to-start labor. If she has missed a night's sleep with contractions, and is tired and discouraged, then she might try a long bath to stop the contractions and give her some rest.

What water temperature is best?

The water temperature should be very close to body temperature, around 98.6 degrees Fahrenheit or 37 degrees Celsius. If it is too warm, the mother's temperature goes up, the baby may develop a fever in the uterus, and the baby's heart rate might speed up too much for safety. Furthermore, the mother often loses her energy if she is in too hot a tub for too long.

This is very important, because a fever in the baby, even when it is not caused by infection, is serious. The baby in the uterus has no way to cool himself down.

Is it safe to use the bath if her membranes have ruptured?

The numerous reports in the medical literature indicate that the bath does not increase the risk of infection if a woman has ruptured membranes.

Can the staff still monitor the baby if the mother is in the water?

Yes. There are waterproof handheld monitors available. Most out of hospital midwives who do water births have one of these. Some hospitals also have one. If not, the portable telemetry monitoring units can be used. Someone holds the radio device out of the water, and the regular sensing devices can be covered with plastic and worn in the water by the woman. If her caregiver has doubts, he or she should check with the hospital's engineering department. They can confirm the safety of immersing the sensing devices.

What about modesty?

She may not want to be naked in front of everyone.

She can wear a sports bra in the water, and shorts (until the birth becomes imminent). Or she may use a towel to cover exposed parts of her body. It is likely that she will not be able to cover up completely all the time, unless she is in a rather small conventional size tub, in which a towel would probably be adequate.

What if the baby is born in the water?

This is always possible. A rapid labor is not always easy to control. If there is a strong policy against birth in the water, then the woman will need to be watched closely and removed in time. If the baby is born in the water, he should be immediately brought to the surface and held by the mother with his head completely out of the water. His head should be dried. Mother and baby should get out of the water before the birth of the placenta, which can make quite a mess if born in the water. Water births happen every day, and are considered a worthy option for hospital births in The United Kingdom. There a survey of all 4000 plus water births in a 25 month period were closely followed up. The outcomes were excellent and comparable to outcomes of very low risk babies who were not born in water.