

GUIDELINE FOR WATER IMMERSION IN LABOUR AND BIRTH

The following information is intended to guide informed choice discussions regarding water immersion for labour and birth and to ensure that women are offered this option in a manner that is safe for both mother and baby. This guideline will provide the midwife an evidence-informed practice tool for offering the option of water immersion to labouring and birthing women.

For the purpose of this guideline, “pool” refers to a pool of water used during labour and/or birth and is synonymous with tub and bath.

POTENTIAL BENEFITS AND RISKS TO WATER IMMERSION IN LABOUR AND BIRTH

POTENTIAL BENEFITS

Maternal

- Non-pharmacological method of pain relief
- Buoyancy takes weight off joints and assists in spontaneous rotation of baby
- Creates a relaxing environment which supports the physiological process of labour
- Decreases blood pressure
- Reduces edema due to redistribution of body fluid when submerged
- Increases space in the pelvis as mother’s ability to move is enhanced and muscles work more efficiently
- Assists in equalizing pressure on tissues and reduces perineal trauma
- Increases client satisfaction of birth experience
- Decreases use of analgesia
- Shortens length of labour (both first and second stage)
- Decreases labour augmentation rate
- Decreases operative birth rate

Fetal/Neonatal

- Improves blood flow to baby due to better blood circulation in the mother
- Creates a more gentle transition to extra-uterine life
- Decreases birth trauma
- Provides thermoneutral water temperature
- Reduces sensory stimuli
- Facilitates skin to skin contact
- Decreases the rate of Group B Streptococcus (GBS) colonization

POTENTIAL RISKS

Maternal

- Improper temperature control of the water may affect maternal temperature
- Prolonged labour if entering water before active labour is established
- Maternal infection may be increased due to improper cleaning/hygiene protocols, and/or lack of disposable liners
- Maternal dehydration (mothers may not feel dehydrated, and will often have an increase in perspiration)
- Blood loss estimation and assessment may be more difficult in the water

Fetal/Neonatal

- Improper temperature control of the water may affect fetal heart rate and fetal temperature control
- Neonatal infection may be increased due to improper cleaning/hygiene protocols, and/or lack of disposable liners
- Neonatal water aspiration

Potential Risks to Midwife

- Acquiring blood born contamination/infection
- Sustaining back injury

If proper care, education, and screening are included in preparation for a waterbirth, maternal, fetal/neonatal and midwife risks can be reduced considerably.

CONTRAINDICATIONS FOR WATER IMMERSION IN LABOUR AND BIRTH

- Maternal or fetal distress
- Intrapartum hemorrhage
- Use of Fetal Scalp Clip
- Pre-term labour, or suspected gestation of less than 37 weeks
- Maternal temperature of 38°C (100.4°F) or higher
- Any condition that contraindicates vaginal birth
- Presence of maternal infection transmitted through fluid or blood, such as Hepatitis B or C, or HIV
- The baby has known defects involving the vagus nerve, such as cardiac disorders or defects of the larynx, respiratory or abdominal organs
- Epidural
- Narcotic sedation
- Woman unable to get in or out of the pool easily

GENERAL CONSIDERATIONS FOR WATERBIRTH

Preparation and Safety:

- **Influence to Birth in Water:** Each woman's wish for a waterbirth is different. During the discussion of the birth plan, the midwife will come to understand the woman's preferences and may offer alternatives should waterbirth be an unsuitable option for her.
- **Hygiene and Infection Control:** To decrease rates of infection, the birth pool and all equipment used should be cleaned and disinfected according to the manufacturer's instructions. Where required, the birth pool should be prepared with a disposable liner for each client using the pool. For clients providing their own pool for a homebirth, the pool should be cleaned and disinfected prior to use.
- Room temperature should be kept warm, between 22-28°C. Room temperature should not be too hot as it may increase the risk of dehydration.
- Warm towels/blankets should be available for the mother and baby.
- There is insufficient evidence to make a recommendation regarding waterbirth for GBS positive women who have not been adequately treated.
- A woman should never be left alone while she is in the birthing pool and must be supported by someone who is capable of assisting her out of the pool or calling for help if need be.
- If at any point the midwife feels it is no longer advantageous for the woman to be submerged in water, she may request for the woman to exit the water.

First Stage of Labour:

- Water temperature should be maintained according to maternal comfort between 32 and 37°C.
- Maternal hydration is of vital importance. A woman should have access to water, ice, juice, or other methods of oral hydration and she should be encouraged to both drink and void frequently.
- A woman who is not presenting with an infection can safely void in the water since urine is sterile. While it is preferable to assist a woman to the bathroom, any urine passed involuntarily does not require a full clean and change of the water.
- To reduce the risk of bacteria being introduced into the vagina, cervix, and uterus, internal exams should be performed with sterile gloves, which may be worn over shoulder-length gloves while the woman is in the water. The midwife may also request that the mother exit the pool in order to perform an internal exam.
- In addition to routine labour documentation, it is best practice to chart the following information when a woman is labouring in the pool:
 - Reason for use of hydrotherapy (eg. maternal request, midwife recommendation etc.)
 - Vital signs for mother and fetus as per standard labour protocol with the exception of maternal temperature which should be taken hourly
 - Time entering/exiting the pool
 - Temperature of water on entering the pool and every hour while the woman is in the water
 - Maternal reaction to hydrotherapy

Second Stage of Labour:

- An alternate birthing area should be prepared near the pool for the mother in case she needs to leave the pool rapidly at the time of birth or postpartum.
- Water temperature should be maintained according to maternal comfort between 36 and 37.5°C when birth is imminent.
- The water should be replaced if fecal matter which cannot be removed is present, or if the stool is loose and renders the water unsuitable. If cleaning is not possible, the mother will need to exit the pool for the birth of her baby.
- In addition to routine 2nd stage documentation, it is best practice to chart the following information when a woman is birthing in the pool:
 - Reason for use of hydrotherapy (eg. maternal request, midwife recommendation etc.)
 - Vital signs for mother and fetus as per standard 2nd stage protocol with the exception of maternal temperature which should be taken hourly
 - Time entering/exiting the pool
 - Temperature of water on entering the pool and often enough to maintain water temperature between 36 and 37.5°C at the time of the birth of the baby.
 - Maternal reaction to hydrotherapy

Third Stage of Labour:

- **Delivery of the Placenta:** The placenta may be safely delivered in the water and is often easier to inspect for completeness after being submerged in the water. If active management of the third stage is desired, an intramuscular (IM) injection of oxytocin may be given in the deltoid. Gentle cord traction may be provided in the water with the same protocol as for active management out of water.
- **Assessment of Bleeding after Birth:** Assessment of bleeding in water is a skill, which the midwife will develop with increased attendance at waterbirths. If there is evidence of excessive bleeding or if the midwife is unable to assess blood loss, the woman should be assisted out of the pool. As stated with Delivery of the Placenta, oxytocin may still be given at any time. A space set up near the pool with blankets, towels, and a kit for postpartum hemorrhage is required so that if needed a woman may exit the pool quickly and receive immediate help.
- **Postpartum Care and Follow Up:** Newborns born in the water do not require special follow-up care. Routine postpartum care should be offered.

NORMAL NEWBORN TRANSITION AFTER A WATERBIRTH

Newborns born in water may have a slightly different appearance than midwives are accustomed to. Their transition time to extra-uterine life is slower than newborns born into air. Between the time of the birth of the head and that of the shoulders, newborns born into air receive some stimuli to their head that does not occur during waterbirth. Therefore, it is common for newborns born in water to have a bluish-lavender appearance and to take up to 60 seconds to breathe regularly after exposure of the face to air.

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