Clinical Guideline

WATER IMMERSION FOR LABOUR AND BIRTH

SETTING Maternity Service, care in all settings

FOR STAFF Midwives and obstetricians

PATIENTS Pregnant people

GUIDANCE

Background

Water immersion during labour and birth for relaxation and pain relief during the first and second stages of labour is a popular and safe option. Users of water immersion during labour and birth voice increased satisfaction with their labour experience (3). Water immersion is effective at reducing pain without increasing risk (2). It can be offered in all birth settings – homebirth (HB), midwifery led unit (MLU), Ashcombe Birth Centre (ABC) or central delivery suite (CDS) – to healthy birthing people who have a straightforward pregnancy and labour commencing between 37 and 42 weeks gestation.

Benefits

Water immersion for labour and birth has been demonstrated to lower rates of episiotomy and post-partum haemorrhage (PPH) (2, 5, 6, 7). Studies show use of epidural analgesia to be lower when women use water immersion for pain relief (2, 4, 7). Rates of augmentation of labour are lower when water immersion is used (4). Water immersion is associated with shorter duration of first and third stages of labour (4). Maternal satisfaction with their experience of labour and birth is widely reported to be higher (2, 4, 6, 7). The chances of an intact perineum are higher (2, 6).

Risks

Studies show no association between water immersion for labour and birth and adverse outcomes for mother or baby (1, 3).
More cord avulsions have been reported to occur with water birth, thought to be due to undue traction on the umbilical cord when babies are brought to the surface of the water. This is however reported to have no consequences for the neonate (2, 5, 7).

Criteria for entry into the pool for labour and birth

a singleton pregnancy beyond 37 weeks gestation, cephalic presentation with no known or envisaged obstetric or medical problems. Please refer to St Michael's co-located midwife led unit – eligibility for labour and birth guideline for more details.

In cases where a birthing person does not meet these criteria and they wish to use the pool for labour and/or birth, discussion should take place with a midwifery matron and/or obstetric consultant, ideally in the antenatal period. This should be clearly documented on Badgernet.

- Pregnant people who have received opioids should not enter the pool for at least 2 hours or if they feel drowsy (8).

- Ruptured membranes are not a contraindication to water immersion as research has not shown there to be increased risk of infection.

- GBS infection in pregnancy is no longer a contraindication for use of the pool see Group B Streptococcus Guideline. However, the birthing person should be encouraged to keep the cannulated hand out of the water.

- Intrapartum Antibiotic Prophylaxis (IAP) must be administered when out of the water, in case of an adverse reaction to medication. The pregnant person should be informed about this in the antenatal period and on admission to the unit.

If there are any concerns around fetal or maternal wellbeing the birthing person should be advised to exit the pool immediately.

Use of water in latent phase

The pool or a bath should be offered in the latent phase as an alternative to medication.

Risk assessment prior to pool entry

- Review of pregnancy, obstetric and medical history – confirm low risk status.
- Temperature, blood pressure, pulse and urinalysis – all should be within normal limits.
- Abdominal palpation to determine cephalic presentation.
- Fetal heart auscultated and is within normal parameters.
- Offer a vaginal examination to confirm established labour, cephalic presentation, position of presenting part, presence/absence of membranes (and colour of liquor if membranes absent) and confirm absence of abnormal features.

Care during the first stage of labour

- Maintain a comfortable water temperature around 37 degrees centigrade. Do not exceed 37.5 degrees centigrade (8).
- Record maternal and pool temperature, and maternal pulse hourly.
- Record the maternal blood pressure (BP) 4 hourly as usual during the 1st stage of labour.
- Record the fetal heart rate (FHR) every 15 minutes during the 1st stage of labour.
- • A “fresh ears” review should be undertaken at hourly intervals by a second midwife. This should be recorded on Badgernet.
- Attempt to keep the water clear.
- Ensure hydration and encourage voiding every 2-4 hours. Record fluid balance as per fluid balance guideline.
- The water in itself is used as pain relief in labour and should be offered as an alternative to opioids or regional anaesthesia.

- Entonox can be offered and administered whilst in the pool.

- The birthing person should not be unattended while they are in the pool if their partner is not present.

- If the maternal temperature rises above 37.5 degree centigrade (tympanic), or if tachycardic (pulse > 100) the woman should be asked to get out of the pool, until temp and pulse normalise before re-entering the pool.

- If there are any signs of fetal compromise the woman is advised to leave the pool and continuous electronic fetal heart monitoring commenced. Transfer to CDS from MLU and community settings. If there are any difficulties auscultating the FHR the woman should be asked to exit the pool.

- The birthing person should be informed that some positions make it very difficult for the midwife to auscultate the FHR without straining their back. The birthing person may be asked to move or even exit the pool if the FHR cannot be monitored without causing undue repeated strain on the midwife. The midwife should be aware of their own individual physical limitations and use stools and aids to ensure their comfort and safety whilst supporting birthing people immersed in water.

Using telemetry for fetal monitoring

- If continuous electronic monitoring in labour is required and the birthing person chooses water immersion, an individual risk assessment should be performed before deciding whether water immersion is appropriate and safe for them.

- If possible, discuss with a midwifery matron and/or the obstetric consultant or the on call obstetric team, ideally in antenatal period, but this can be done at any time if required.

- The telemetry abdominal transducer can be used in water, but only up to a depth of 50cm. It may be difficult to monitor the FHR effectively and it should be explained to the birthing person that they may need to exit the water if monitoring of the fetus is unsatisfactory/there are concerns about fetal wellbeing.

Do not use the telemetry fetal scalp electrode (FSE) transducer under water as it is not watertight.

A FSE is not recommended.

Care during the second stage of labour

Most care during the second stage of labour will be the same as that out of the pool, however “hands on” perineal protection as part of the OASI bundle cannot be practiced in water. Immersion in water will help to soften and stretch the perineum. Two midwives should be present for the birth, one of whom must be competent in caring for women/birthing people labouring and delivering in water. As a minimum one midwife should be a band 6/7 with competent skills in water birth.

- Maintain a comfortable water temperature around 37 degrees centigrade. Do not exceed 37.5 degrees centigrade.

- Record the FHR at least every 5 minutes during the 2nd stage of labour.
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- The water must be deep enough for the baby to be born completely submerged under water.
- Progress of the emerging head can be observed with the use of a mirror and torch if necessary.
- Slow crowning and birth of the head should be encouraged to minimise perineal trauma.
- The midwife should practice 'hands off' care. This will minimize stimulation of the emerging baby. Non-stressed babies are unlikely to commence breathing whilst underwater.
- The birthing person or midwife should reach down and support the baby as it emerges.
- The cord can be loosened and disentangled if necessary, as the body emerges.
- The baby should be brought gently to the surface, face uppermost, and care taken to ensure the cord is long enough to allow this.
- Avoid undue traction on the umbilical cord as the baby's head surfaces from the water. This minimises the possibility of the cord snapping.
- Following the birth rest the baby's head above the water keeping the body submerged, skin to skin with woman. This will keep the baby warm and promote skin to skin contact. Babies born into water have less stimulation to breathe e.g. cold air. It may be necessary to lift the baby out of the water for a few seconds to stimulate the first breath.
- If respiration is not established within one minute of birth, the cord should be clamped and cut, and the baby removed from the pool for resuscitation. Commence neonatal resuscitation immediately.
- The cord should never be clamped and cut whilst baby is still under the water.
- Once the baby's head has come out of the water it must not be submerged again

Be aware that restitution still occurs under water and at no point should the midwife expedite the birth of the body unless suspected shoulder dystocia is observed. All manoeuvres for shoulder dystocia should be performed clear of the water.

Clearly document whether the baby was born under water and the condition of the baby at birth

The midwife should not top up the water to maintain the temperature during a home birth. This is the responsibility of the birth supporter and should be discussed at the home birth risk assessment visit.

Care during the third stage of labour

There is no current evidence to support that the 3rd stage must be conducted outside of a birthing pool. However, it is not possible to accurately measure blood loss in a pool. It may be necessary to transfer the birthing person out of the pool in order to accurately assess blood loss.

Risk of water embolism has not been validated in current research.

- If physiological 3rd stage is planned wait for cord to stop pulsating. It may then be clamped. Await signs of separation (trickle of blood, lengthening of cord). Maternal effort is used to expel the placenta. An upright position in the water will assist this or alternatively the birthing person can stand up or leave the pool for the placenta to be delivered by maternal effort.

- After the 3rd stage is complete, the birthing person should be asked to leave the pool and examination for trauma to the perineum should be undertaken with informed consent.

- If active 3rd stage is planned or indicated it is recommended that the birthing person leaves the pool prior to the delivery of the placenta. This allows controlled cord traction and guarding of the uterus during active 3rd stage to be carried out safely.

- If there is evidence of haemorrhage, syntometrine/oxytocin can be given (in the upper arm if necessary if the water level is still high) and the birthing person then transferred out of the pool.

Refer to the Labour Care guideline for more information on the 3rd stage and examining the perineum .

Care of the mother and baby after delivery

Post-natal care as normal ensuring baby temperature is maintained if remaining in the water.

- Place a hat on the baby and keep the baby's body in the water.

- Dry and cover baby in warm towels when exiting the pool.

The handling of emergency situations during pool labour/birth

It is vital that arrangements are clear to all staff and birthing people and their partners about how these emergencies should be managed:

- **Faint / collapse:**
  - Call for help – [redacted] (MLU), [redacted](ABC, HB)
  - Support the birthing person's face above water
  - Use floatation aids or net / hoist to remove the person from the pool
  - Do not attempt to empty the pool as this will prevent the use of the hoist as the person will be too low down in the pool

- **Shoulder dystocia:**
  - Call for help – Emergency Bell (CDS), [redacted] (MLU), [redacted] (ABC, HB)
  - Ask the person to get out of the pool as quickly as possible and commence required manoeuvres
  - Be aware that the movement of exiting the pool may release the shoulders and precipitate delivery, be ready to 'catch' the baby.

Infection control

There is no evidence of any significant differences in the incidence of maternal infection when water immersion is used during labour and birth.

Birthing people using the pool should have intact skin and be free from skin conditions, such as eczema or psoriasis, or blood borne viruses, to protect against infection.

Staff must ensure that all cuts and abrasions are covered with a waterproof dressing.

Partners may choose to enter the pool, but this is at their own risk. They should be appropriately attired.

The Midwife should not enter the pool at any time.

During care of the woman/birthing person in labour ensure that water is not splashed onto the floor and the surrounding area is kept dry.

The pool should be always kept free of faecal matter and contamination of any kind should be removed.

If there is heavy contamination the birthing person should be advised to leave the pool, the pool must be emptied, cleaned in accordance with current infection control recommendations and thoroughly dried before refilling.

Sieves and emergency nets are single patient items.

The hoist may have a reusable or single patient use slings. Please check before discarding after use.

Use disposable covers on thermometer probe when immersing in water, taking care to keep the main body of the thermometer dry.

Clean the pool thermometer thoroughly after use with Clinell wipe.

Clean the hand held doppler thoroughly after use with Clinell wipe.

When the pool is empty of water, clean with Actichlor.

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RELATED DOCUMENTS AND PAGES	Fetal monitoring in labour [redacted] Fluid balance and hyponatraemia in labour and immediate postnatal period [redacted] Group B Streptococcus (GBS) infection care in pregnancy and labour [redacted] Immediate care of the newborn on CDS [redacted] Labour Care clinical guideline [redacted] Pain relief in labour – non epidural [redacted] St Michael's co-located midwife led unit – eligibility for labour and birth [redacted]
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