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## Research Review: Waterbirth Continues to be an Appropriate Option for Low-Risk Families

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A new systematic review of the safety of water immersion on the birthing person and the newborn during labor and birth was recently published in the Cochrane Database of Systematic Reviews. The review of 15 studies was conducted by Elizabeth R. Cluett, Ethel Burns, and Anna Cuthbert, all researchers from the United Kingdom. The conclusion of their systematic review, [Immersion in water during labour and birth \(http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD000111.pub4/epdf\)](http://cochranelibrary-wiley.com/doi/10.1002/14651858.CD000111.pub4/epdf), found "*no evidence that labouring in water increases the risk of an adverse outcome for women or their newborns.*" Waterbirth International founder Barbara Harper has examined the topic of waterbirth on this blog in the past few years with her article "[ACOG Releases New Committee Opinion & Acknowledges Waterbirth is Happening More Often in US \(p/bl/ar/blogaid=915\)](#)" and "[Why Pediatricians Fear Waterbirth - Barbara Harper Reviews the Research on Waterbirth Safety. \(p/bl/ar/blogaid=43\)](#)" The findings in this just-published review continue to confirm laboring and birthing in water is a safe and acceptable option for those who choose it. It is important to examine this issue as new information becomes available as there are concerns that newborns may be adversely impacted by being born in water.

### Introduction

People in labor have long used water to help with the discomfort of contractions and have at times chosen to birth their babies in the water as well. While more common for families choosing an out of hospital birth location (home or birth center) with a midwife, there are some hospitals in the United States and around the world that support and provide resources for parents to labor and birth in water when admitted to the hospital. In particular, there is an increase in waterbirth options in the hospital in areas where midwives have a strong presence on the labor unit. With this increase, it is important to confirm that waterbirth is a safe and viable option for healthy parents and babies.

### Methods



The researchers examined 15 trials that included a total of 3663 women who labored and/or birthed in water. Randomized controlled trials (RCTs) comparing water immersion with no immersion, or other non-pharmacological forms of pain management during labor and/or birth in healthy low-risk women at term gestation with a singleton fetus were included.

### Results

All the studies were conducted between 1990 and 2015 and evaluated people who were birthing in a hospital. Eight of the studies involved water immersion during the first stage of labor; two during the second stage only; four during the first and second stages of labor, and one comparing early versus late immersion during the first stage of labor. None of the studies were done in a midwifery-led setting. The parity of the study participants was often not identified.

### Laboring in water or not laboring in water

There was no difference in spontaneous vaginal birth for those who labored in water or did not labor in water during the first stage. There was also no difference in the number of instrumental vaginal deliveries, cesarean sections or babies who were admitted to the NICU. There is insufficient evidence to determine the effect of immersion on estimated blood loss and third- or fourth-degree tears. There was a

small reduction in the risk of using regional analgesia for people allocated to water immersion from 43% to 39%. Perinatal deaths were not reported, and there is insufficient evidence to determine the impact on neonatal intensive care unit (NICU) admissions or on neonatal infection rates.

### Pushing and birth in water or not pushing and birth in water

There were no clear differences between groups for spontaneous vaginal birth, instrumental vaginal birth, cesarean section, and NICU admissions. Use of regional analgesia (epidural) was not relevant to the second stage of labor. Third- or fourth-degree tears, and estimated blood loss were not reported in either trial. No trial reported neonatal infection but did report no significant difference in neonatal temperature less than 36.2°C at birth, greater than 37.5°C at birth, and fever reported in the first week. One perinatal death occurred in the immersion group in one trial. The infant was born to a mother with HIV and the cause of death was deemed to be intrauterine infection.

### Conclusion

After conducting this systematic review, the authors concluded that In healthy women at low risk of complications that water immersion during the first stage of labor probably has little effect on mode of birth or perineal trauma, but may reduce the use of regional analgesia. The evidence on this is moderate to low-quality. The evidence for immersion during the second stage of labor is limited and does not show clear differences on maternal or neonatal outcomes. There is no evidence of increased adverse effects to the fetus/neonate or woman from laboring or giving birth in water. Available evidence is limited by clinical variability and heterogeneity across trials, and no trial has been conducted in a midwifery-led setting.

Two trials compared water immersion during the second stage with no immersion. The researchers concluded that immersion may make little or no difference in numbers of people who have a normal vaginal birth. It is uncertain whether immersion makes any difference to instrumental vaginal births, cesarean sections, numbers of babies admitted to NICU, babies' temperatures at birth and fever in babies during the first week because the quality of the evidence was found to be very low for all of these outcomes. Serious perineal tears and blood loss after birth were not reported in either trial.

Overall, the researchers' review found no evidence that laboring in water increases the risk of an adverse outcome for birthing people or their newborns. The trials varied in quality and further research is needed particularly for waterbirth and its use in birth settings outside the hospital before there can be more certain of these effects. Research is also needed about expectant people and caregivers experiences of labor and birth in water.

### The takeaway for educators and others


Laboring in water is often desired by pregnant people who are looking to relieve the pain and discomfort of labor and birth. Most facilities are able to accommodate the request to labor in water for healthy low-risk people. Birthing in water is less common, but there are some facilities who are prepared to support waterbirth. When discussing hydrotherapy with students and clients, educators and other birth professionals can share that the most recent Cochrane review does not show any adverse effects for parent or baby and may reduce the need for an epidural. The request for water immersion during labor should be honored by staff if there are not any extenuating circumstances present. The ability to birth in water will be dependent on the hospital's ability to safely support a water birth, but that should that be possible, again, there are no adverse effects noted. Educators can confidently share that based on the most current research, using water to help support a low-intervention birth is an appropriate option for low-risk families.

### Resources


Cluett, E. R., Burns, E., & Cuthbert, A. (2018). Immersion in water during labour and birth. *The Cochrane database of systematic reviews*, 5, CD000111-CD000111.

**Released:** July 17, 2018 01:03 PM | **Updated:** July 17, 2018 01:03 PM

**Keywords:** [Labor/Birth \(p/bl/kw/kt=1&kw=Labor%2FBirth\)](#) | [Professional Resources \(p/bl/kw/kt=1&kw=Professional%20Resources\)](#) | [Cochrane \(p/bl/kw/kt=2&kw=Cochrane\)](#) | [Labor And Birth \(p/bl/kw/kt=2&kw=Labor%20And%20Birth\)](#) | [Research Review \(p/bl/kw/kt=2&kw=Research%20Review\)](#) | [Sharon Muza \(p/bl/kw/kt=2&kw=Sharon%20Muza\)](#) | [Waterbirth \(p/bl/kw/kt=2&kw=Waterbirth\)](#) | [Waterbirth Safety \(p/bl/kw/kt=2&kw=Waterbirth%20Safety\)](#).

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