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Water Birth

WATER BIRTH AROUND THE WORLD

Water is revered in every culture for its life-sustaining and healing properties. Women have been using water in labour and birth for millenia . Ancient Egyptian petroglyphs depict water births of babies destined to become preists or priestesses. The oral histories of indigenous peoples on every continent - from New Zealand to Mongolia, Panama to Japan - include stories about women giving birth in the ocean tide pools, in streams and in shallow lakes.

In the 1960s, Igor Tjarkovsky, a swimming instructor and midwife, popularized water birth in Russia. In 1983, Herman Ponette, an obstetrician, began installing birthing

tubs in his hospital in Belgium. Since then, he has attended over 5,500 water births.

In the United Kingdom, even the government recognizes the potential benefits of water birth. In 1992, the UK House of Commons recommended that whenever possible, women have the option to birth in water. Nearly half of all maternity hospitals in the UK have installed birthing pools and there are at least 2,000 water births per year.

BENEFITS OF WATER BIRTH

Many women find that being immersed in water during labour and birth gives them an increased sense of control, comfort and relaxation. If you are the kind of person who enjoys spending time in water, you may enjoy the following benefits from birthing your baby in water:

- You may feel more relaxed and better able to cope with your contractions
- You may need less pain medication because your contractions are easier to cope with
- You may find it easier to move intuitively to ease your baby through your pelvis

- Your cervix may open faster and your labour may be shorter
- You may have less need for medication to help your labour because your contractions work better
- You may have less need for help from forceps, vacuum or caesarean to give birth to your baby
- You may have less need for an episiotomy and less chance of having a serious tear

Some people have also suggested that water birth is a gentler experience for baby as well as for mom.

IS WATER BIRTH SAFE?

The research about the safety of water birth is not conclusive. However, the existing studies seem to suggest that birthing in water is a safe option for women with healthy pregnancies and uncomplicated labours.

To understand the available evidence about water birth, you need to know a little about medical research. The gold standard for a research study is a Randomized Controlled Trial (RCT), meaning that the subjects are randomly assigned to either a treatment group or a control group. However, there have not been any good RCTs about water birth because most women would not be willing to be randomly directed to birth in water or on land.

The next best thing to an RCT is a cohort study. A cohort study compares a treatment group with a control group but the subjects are not randomly assigned so there is a chance for bias. There are a number of large cohort studies looking at water birth. They have all found that

when compared with land birth, water birth is associated with:

- Similar or lower rates of infection in mothers and babies
- Similar or better results on tests that evaluate the baby's wellbeing after birth
- Similar or lower rates of babies admitted to special care nurseries
- Similar or lower rates of baby deaths

A case study describes the experience of one patient or a few patients. Case studies are the weakest form of evidence, although they are sometimes the only way to learn about very rare problems. A number of case studies have reported on babies who have become sick or died after being born in water. However, these problems have not been reported by any of the larger, better quality studies.

WHAT STOPS BABIES FROM BREATHING UNDERWATER?

A number of factors inhibit babies from breathing underwater at the time of birth:

- *Hormones:* You might be surprised to learn that your baby has already begun practicing breathing before birth, inside the uterus. Researchers have observed breathing movements in the human fetus as much as 40% of the time. However, in the days before labour begins, breathing activity decreases dramatically because of prostaglandins, hormones released by the placenta which also play a role in starting labour.
- *Temperature:* Newborn babies are sensitive to temperature. They are stimulated to breathe by the cooler temperature of air compared to the warm environment inside the mother. However, when born into water that is at a similar temperature to the mother's body temperature, they are not stimulated to breathe.
- *Dive Reflex:* Humans have a powerful dive reflex which maximizes their ability to hold their breath underwater. This reflex is associated with the larynx, the opening to the lower airway. The opening to the larynx is covered with more taste buds than the entire surface of the tongue. These taste buds can distinguish between bodily fluids (like mucus, urine, blood, or amniotic fluid) and other foreign fluids (like water). When they encounter a foreign fluid, they elicit the dive reflex. The opening to the airway closes and the fluid is swallowed, not inhaled. In addition, nerves in the face sense when the face is



Babies are born with the dive reflex, which inhibits them from breathing underwater

immersed in water and send messages to the brain. The brain responds by inhibiting breathing, decreasing heart rate, and redirecting blood to the brain and heart where it is needed most. This reflex helps to prevent babies from gasping for air when they are born underwater.

- *Hypoxia:* Babies are born experiencing acute hypoxia, meaning they are temporarily lacking oxygen. This inhibits breathing. However, babies born experiencing severe, prolonged lack of oxygen may gasp for air. As a result, your midwife will monitor your baby's well being during labour. If there are any signs that your baby may be experiencing a prolonged lack of oxygen, your midwife will ask you to get out of the water.

GUIDELINES FOR WATER BIRTH

To help keep you and your baby safe while having a water birth you need to:

- be having a healthy pregnancy
- be 37 weeks gestation or later
- be in a warm (not hot) bath (between 36-37.5°C)
- have no strong medications such as morphine
- leave the water if your care provider has any concerns with your or your baby's wellbeing
- plan to leave the tub to give birth to the placenta so your midwife can accurately know how much blood you have lost

WATER BIRTH IN THE HOSPITAL

BC Women's Hospital supports women who choose to have water births. If you are planning a water birth at BC Women's Hospital, you will be asked to read some information about water birth and sign a waiver acknowledging that you understand the risks and benefits. Unfortunately, there is no guarantee that your hospital room will have a bathtub.

St. Paul's Hospital does not currently allow water births. If you are planning a birth at St. Paul's, we encourage you to sign a petition or write a letter supporting women's choice to give birth in water.

SUPPLIES FOR WATER BIRTH AT HOME

If you are planning a home water birth, you will need to obtain some basic supplies:

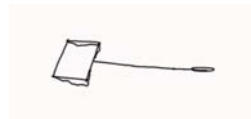
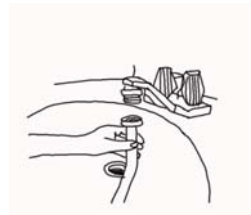
Birth Pools

- You can buy an inflatable children's pool from hardware stores such as Canadian Tire for about \$35
- You can buy a specialized birth pool from a birthing supply store. For example, Mama Goddess Birth Shop offers a 5'x4'x2' pool for \$120. See their website at: <http://www.mamagoddessbirthshop.com>
- You can give birth in your own bathtub. However, consider the size of your bathroom and how many people you plan to have at the birth. Will they all be able to fit comfortably in your bathroom?



In addition, you will need...

- *Floating thermometer* to ensure that the water temperature is maintained around 36-37.5°C
- *Garden hose* to fill the birth pool
- *Universal faucet adaptor* to attach the garden hose to your kitchen sink
- *Long-handled net* for keeping the pool free from unwanted debris





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WATER BIRTH RESOURCES

Books

We Are All Water Babies

By Jessica Johnson and Michel Odent (1995)
Photography and text exploring our links with water from birth to death.

The Water Birth Book

By Janet Balaskas (2004)
This comprehensive guide from the UK author of *Active Birth* includes the history of birthing in water, the benefits of water in labour, choosing a water birth, and preparing for a water birth.

Water Birth: An Attitude to Care

By Diane Garland (2001)
Explores the practical issues of setting up a water birthing facility both at home and in a hospital environment, explains issues of maternal and newborn physiology, and discusses practical aspects of care during and after use of a birthing pool.

DVDs

Birth Day (66 min)

Shows the birth of a midwife's third child in her hot tub at her home in Xalapa, Mexico

The Art of Birth (29 min)

Australian film shows four gentle births in water (two in birth centers and two at home)

Birth Into Being: The Russian Waterbirth Experience (28 min)

Shows two births in the Black Sea and two births at home in a clear birthing pool

Research

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