



Evidence that Empowers!

By Rebecca Dekker, PhD, RN, APRN of EvidenceBasedBirth.com

Question: Should people giving birth be able to eat and drink during labor if they want to?

Answer: Yes. In people who are unlikely to need general anesthesia, it is extremely rare to experience complications from eating and drinking during labor.

Researchers combined ten studies that randomly assigned 3,982 low-risk women to more or less restrictive food and drink regimens ([Ciardulli et al. 2017](#)).

They found that people laboring under less restrictive eating and drinking policies had shorter labors by about 16 minutes and no other differences with regards to Cesareans, operative vaginal births, vomiting, newborn Apgar scores, or any other health issues.

Question: If researchers recommend that women decide whether to eat or drink in labor or not, why do so many hospitals require fasting?

Answer: As evidence has changed over the years, hospitals have not done much to update their policies. The original concern was the risk of something called aspiration, a rare event that could happen if you need general anesthesia (put to sleep) for a Cesarean.

Question: What is aspiration?

Answer: Aspiration is when a person vomits stomach contents into the lungs. Illness and death from aspiration used to be more common during Cesareans back in the 1940s, which is why “Nothing by Mouth” restrictions were started.

However, since the 1940s, the use of general anesthesia has declined to less than 6% of Cesarean births ([D’Angelo et al. 2014](#)). The increased use of epidurals, as well as new techniques anesthesiologists use to manage stomach contents and keep a person’s airway safe during surgery, have made aspiration an incredibly rare event. These advances were not available back in the 1940s.

Question: So how often does aspiration happen during Cesareans today?

In a large study of 45 million births, researchers looked at 129 anesthesia-related maternal deaths that happened in the U.S. between 1979 and 1990. During that decade, 33 people died from aspiration during a Cesarean under general anesthesia, or approximately 1 death for every 1.4 million births ([Hawkins et al. 1997](#)).

In the United Kingdom, people are encouraged to eat and drink as desired during labor. UK’s National Audit Project found one serious illness from aspiration out of 720,000 deliveries during the study period ([Cook et al. 2011](#)).

Question: Are there any situations where fasting might make more sense?

Answer: A few health conditions can increase risk of aspiration: eclampsia, pre-eclampsia, obesity, and the use of intravenous (IV) opioids (such as morphine) to manage labor pain. People with these risk factors might lower their risk of aspiration by fasting during labor ([Harty et al. 2015](#)).

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“**Bottom line: People have the right to decide whether or not they’d like to eat and drink during labor.**”

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Vitamin K for Newborns

By Rebecca Dekker, PhD, RN, APRN of EvidenceBasedBirth.com

Question: Why do we give Vitamin K to newborns? What are the benefits and risks?

Answer: Vitamin K is given to prevent a rare but possibly deadly brain bleed in the first 6 months of life. The benefit is protection against bleeding in the brain and stomach. The risks include pain at the injection site, bruising, and swelling.

Evidence: Vitamin K is a vitamin we need to clot blood. We do not make Vitamin K ourselves, and we get most of our Vitamin K from plants.

“The main risk factors for bleeding are exclusive breastfeeding and not receiving Vitamin K after birth.”

Babies are born with very small amounts of Vitamin K. There is very little Vitamin K in breast milk. Babies who are exclusively breastfed have low Vitamin K levels until they start eating solid

foods at six months.

A baby who does not have enough Vitamin K can start bleeding spontaneously, without warning. This type of bleeding can happen after birth (*early bleed*), in the first week of life (*classical bleed*), and from week two until six months (*late bleed*).

Late bleeding is the most dangerous kind, because it often starts out as bleeding in the brain. These babies do not have any type of head trauma—they simply start bleeding because they cannot clot anymore.

Late bleeds are rare, but they can be prevented with Vitamin K. Late bleeds happen to:

- 4 to 11 babies out of every 100,000 who do not receive any Vitamin K at birth
- 1 to 7 babies out of every

100,000 who receive 3 doses of oral Vitamin K after birth

- 0 to 0.64 babies out of every 100,000 who receive injectable Vitamin K after birth

There are several myths on the internet about Vitamin K:

Myth: You do not need Vitamin K if you have a gentle birth. **Fact:** Late bleeds can happen to any baby who is exclusively breastfed and does not receive Vitamin K.

Myth: The shot causes leukemia. **Fact:** Research has shown that the shot does not cause leukemia.

Myth: You do not need Vitamin K if you use delayed cord clamping. **Fact:** There is little-to-no Vitamin K in cord blood.

Myth: The shot is full of toxins. **Fact:** You can request a preservative-free version of the shot.

Myth: The oral Vitamin K is just as effective as the shot.

Fact: There is only 1 oral regimen that is as effective as the shot: 2 mg orally at birth plus 1 mg weekly while breast milk makes up > 50% of feedings. There is no FDA-approved oral version in the U.S.



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For more information visit www.EvidenceBasedBirth.com/VitaminK



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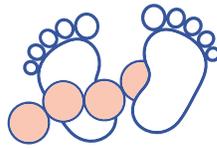
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Evidence that Empowers!

By Rebecca Dekker, PhD, RN, APRN of EvidenceBasedBirth.com

Question: What is Group B Strep?

Answer: About 10% to 30% of pregnant people carry Group B Streptococcus (GBS)—a bacteria—in their bodies. Most people with GBS do not have symptoms. In newborns, GBS can cause sepsis (infection of the blood after birth), meningitis, and pneumonia. Early GBS infection in newborns is thought to begin before birth, when GBS is transferred from the mother to fetus in utero, usually after the water breaks.

Question: What is the risk of a newborn becoming infected with GBS?

Answer: If someone who carries GBS is not treated with intravenous (IV) antibiotics during labor, the baby's risk of developing a life-threatening GBS infection is 1% to 2%. If someone who carries GBS is treated with antibiotics during labor, then the risk of their baby developing an early GBS infection drops to about 0.2%.

Question: What is the evidence on screening everyone for GBS and treating people who are positive with IV antibiotics during labor?

Answer: In the United States, the Centers for Disease Control (CDC) recommends a universal screening approach for GBS during pregnancy because it has been associated with fewer early GBS infections compared to giving antibiotics based on risk factors alone. The current CDC recommendation is that the following people receive IV antibiotics every 4 hours during labor to prevent early GBS infection:

- People who have GBS in their urine at any time during the current pregnancy
- People who have had a previous infant with GBS infection
- People who screen positive for GBS colonization 35-37 weeks of pregnancy (unless a Cesarean is done before the water breaks)
- People without screening results who are <37 weeks gestation, have their waters broken for ≥ 18 hours, or have a temperature ≥ 100.4 F (≥ 38.0 C)

Question: How do antibiotics during labor affect a newborn's microbiome?

Answer: Studies have found that IV antibiotics during labor or during a Cesarean probably affect the infant's microbiome by decreasing beneficial bacteria and increasing potentially harmful bacteria. However, this effect seems to be temporary for most infants, and the negative effect is lessened when the infant is exposed to vaginal birth and/or breastfeeding.

Question: Is there anything other than IV antibiotics that works to get rid of GBS?

Answer: Taking probiotics (lactobacilli) may lessen your chances of being colonized with GBS. The first randomized trial on using probiotics to reduce GBS colonization in pregnant people was published in 2016. They found that when GBS positive people took probiotics, 43% of them became GBS negative by the time of birth. In contrast, when people who were GBS positive who took a placebo, only 14% of them were negative by the time of birth. As far as other alternatives go, washing the vagina with Chlorhexadine during labor has not been shown to be effective in randomized trials. We do not have evidence on the safety or effectiveness of garlic.

Question: What is the bottom line?

Answer: In the U.S., screening and treating for Group B strep is recommended by the CDC. We need more research on whether taking probiotics throughout pregnancy can decrease your chances of screening positive.

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“Penicillin rapidly crosses the placenta into the fetal circulation (at non-toxic levels) and can prevent GBS from growing in the fetus.”

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Question: Are routine IV fluids necessary during labor when people are free to drink?

Answer: No. When laboring people are free to drink, the use of IV fluids can be guided by each person's unique situation.

Evidence: Only two trials have compared IV fluids to no IV fluids among laboring people who are free to drink oral fluids. When these two studies were combined in a Cochrane review, researchers found that people who received IV fluids plus oral fluids had shorter labors (by about 30 minutes) compared to those who drank oral fluids alone. The authors concluded that the evidence does not justify routine administration of IV fluids.¹

Question: Are routine IV fluids necessary during labor when people are not allowed to drink?

Answer: Medical organizations do not recommend restricting low-risk people to ice chips or sips of water during labor, including people with epidurals. This means that hospitals with policies that forbid drinking are not staying up-to-date with the guidelines. Policies of "nothing by mouth" or "ice chips only" can be especially harmful when IV fluids are given at a lower rate of 125 mL/hr.

Evidence: In 2017, researchers combined the evidence from seven trials with a total of 1,215 people; most were not allowed to drink oral fluids at all. They found that people who received IV fluids at 125 mL/hr versus 250 mL/hr had longer labors by about one hour and a 30% higher risk of Cesarean.² These findings suggest that people who are not allowed to drink may benefit from higher rates of IV fluids, possibly by reducing the rate of Cesareans from Failure to Progress. However, these drinking restrictions are not evidence-based in the first place. To learn more about restrictions on eating and drinking during labor, visit ebirth.com/eating.

Question: What are the possible side effects from IV fluids during labor?

Answer: High amounts of IV fluids during labor can lead to an artificial drop in the newborn's weight and possible painful breast swelling, both of which can harm breastfeeding.

Evidence: In 2012, researchers found that when people received >2,500 mLs of IV fluid during labor (more than 1 large bag), their babies were more likely to lose weight after birth.³ These babies were born with excess fluid in their bodies, leading them to urinate more in the first day of life. Concerns about excess weight loss can cause anxiety for new parents and lead to supplementation with formula, which in turn can reduce the mother's supply. Researchers suggest that if mothers receive large amounts of IV fluids, providers could use the newborn's 24-hour weight as a baseline, or use a 10% cut-off to define weight loss (instead of the 7% cut-off defined by the American Academy of Pediatrics.)

Another small study found that people who received higher amounts of IV fluids during labor reported more post-partum breast tenderness and had more breast firmness when palpated (touched) by the researcher.⁴ More research is needed on the maternal side effects of IV fluids during labor.

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“The use of IV fluids in labor can be guided by each person's unique situation. Examples of medical reasons for IV fluids include nausea, vomiting, maternal exhaustion, or prolonged labor.”

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Question: What are the benefits and risks of waterbirth for mothers and babies?

Answer: The available research shows that waterbirth has many benefits for mothers. Evidence has also shown that babies born in the water have similar health outcomes compared to babies born on land. However, the evidence is not strong enough to look at rare adverse effects or potential long-term benefits or harms of waterbirth.

Evidence: In 2017, researchers pooled 39 studies and compared over 12,500 hospital waterbirths to nearly 16,000 hospital land births.¹ There were no differences in any health outcome including NICU admissions, Apgar scores, breathing difficulty, need for resuscitation, infection rates, umbilical cord pH, or low body temperature between babies born in water or on land.

The largest randomized trial to ever examine waterbirth was conducted in 2013 at a hospital in Iran;² 100 people were assigned to waterbirth and 100 people were assigned to land birth. They found that fewer people assigned to waterbirth had Cesareans compared to those assigned to land birth (5% versus 16%). People in the waterbirth group also reported less pain with labor compared to the land birth group. There was less meconium in the mother's amniotic fluid with waterbirth (2% versus 24%) and fewer low Apgar scores.

The largest observational study ever on waterbirth – and first to report results from the U.S. – included over 6,500 waterbirths attended by midwives at homes and birth centers.³ For mothers and babies, waterbirth was associated with fewer postpartum transfers to the hospital and fewer hospital admissions during the first 6 weeks postpartum. However, the people who completed waterbirths were also the ones at lowest risk for health problems. There were no differences in newborn death rates or Apgar scores between water and land births. For unknown reasons, they found that mothers who gave birth in the water experienced a small increase in mild labial tears. Other researchers have found a decrease or elimination of episiotomies (cutting the vagina with scissors) with waterbirth.⁴

What do professional organizations say about waterbirth?¹

The American College of Nurse Midwives, American Association of Birth Centers, and the Royal College of Obstetricians and Gynaecologists in the United Kingdom, all support waterbirth as an option for healthy women. The American Congress of Obstetricians and Gynecologists (ACOG) came out with a strong statement against waterbirth in 2014. In 2016, they updated their Opinion Statement to state that the potential risks have not been sufficiently studied to support or encourage a person's request to give birth in water. They continue to recommend that birth occur on land, not in water. However, they acknowledge the maternal benefits of water immersion during labor and support informed choice and more research on waterbirth.^{5,6}

What's the bottom line?

The bottom line is that waterbirth is a reasonable option for low-risk birthing people, as long as they understand the potential benefits and risks. If women have a strong desire for waterbirth, and there are care providers who are comfortable attending waterbirths, then at this time there is no evidence to deny this option of pain relief.

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“Evidence shows that babies born in the water have similar health outcomes compared to babies born on land.”

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