

**Evidence on:
GBS, PROM, and
Waterbirth**

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Translation and Closed Captions

- An automated live transcription in English will be accessible during the live training
- Live Spanish translation is available during the public showings of the webinar
- The recording with CC will be available on YouTube.
- Please wait a moment while we make sure these features are turned on and functioning

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Disclaimer

- Watching this webinar does not mean that we have entered into a patient-care provider relationship.
- Nothing in this course shall be construed as medical advice.
- Talk with a care provider before putting this information into practice.
- Content is not guaranteed to be 100% accurate or up to date.
- Content note: GBS info can be upsetting to some; we will be talking about infections and medical interventions

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What percentage of your clients/friends receive antibiotics for Group B Strep?

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How many of you have personally experienced premature rupture of the membranes?

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How common is waterbirth where you live?

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This webinar will help you debunk 3 myths about GBS, PROM, and Waterbirth!

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Seven horizontal lines for notes.

How will today's webinar work?

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Seven horizontal lines for notes.

We will cover:
1. Microbiome & Group B Strep
2. Induction for PROM
3. Benefits (& Risks) of Waterbirth

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Seven horizontal lines for notes.

Background

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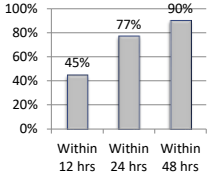
What is GBS and how common is it?

- A streptococcus bacteria that lives in the intestines
- Anywhere from 8 to 35% of pregnant people carry GBS
- Most of the time it is physiological, but it can cause infections when the immune system is suppressed or immature
- “Early onset GBS disease” occurs days 0 to 6 days of life
 - Caused by GBS gaining access to amniotic fluid
 - Usually begins after water breaks, before birth

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What is PROM, and how common is it?

- Prelabor or “premature” rupture of membranes (PROM) is defined as water breaks before the start of labor
 - Term PROM ≥37 weeks
 - Preterm PROM < 37 weeks
- Happens in about 10% of term pregnancies



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What is Waterbirth?

- Water immersion in labor is when a person is in a tub of water during the first stage of labor
- Waterbirth is when you remain in a tub during the pushing phase and actual birth of the baby
- Land birth is when someone is born on dry land, not in a tub
- Hydrotherapy describes water immersion in labor and/or waterbirth

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Tips for Looking at Info Online

- Sounds too good (or too scary) to be true
- Makes claims without backing them up with references
- Uses inflammatory language
 - Example: “toxic” or “horrible” or “dangerous”
- Relative risk vs. absolute risk
 - Example: 50% higher OR
0.3 per 1,000 vs. 0.2 per 1,000



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Group B Strep and the Microbiome

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MYTH:
 It's easy to prevent
 GBS, and routine use
 of antibiotics is
 outrageous.

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Why do some people's results change?

- We each have our own unique *microbiome*
- If you are GBS+, GBS is present in intestines and flourishing enough that it migrated to rectum and/or vagina
- It is true that the healthier your microbiome (aka more probiotics), the more acidic your vagina, and the less likely you are to have GBS in your birth canal!

Hanson et al. (2022)

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Probiotic supplements for reducing GBS

- So far, we do not have compelling research that taking probiotics can lower the risk of testing positive for GBS
- A high-quality trial enrolled 109 healthy pregnant people and randomly assigned them to probiotics or placebo
- The probiotic group had fewer GI symptoms, but no difference in testing positive for GBS at 36 weeks
- A large study with better adherence is needed

Hanson et al. (2023)

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Is it possible to change your GBS results?

- Yes, but that does not mean it is easy or permanent
- The social media example had a lot of false assumptions:
 - Healthy foods are affordable/accessible for all
 - Racism is not interfering with your microbiome
 - Natural interventions (such as natural sources of probiotics or garlic) will work every time and the effects will not wear off

Carter et al. (2019)

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What are antibiotics?

- Antibiotics = medications that target and kill bacteria
- Before antibiotics were widely available, bacterial infections caused massive amounts of human suffering
- But antibiotics are not new– for thousands of years, humans have been identifying and using antibiotics
- Antibiotics are a useful tool, but problems include side effects, microbiome effects, allergies, and resistance

Hutchings et al. (2019)

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Why are antibiotics sometimes used for GBS?

- Info from 3 small randomized trials showed that when people with GBS had antibiotics during labor, the risk of newborns with early GBS disease dropped by 83%
- A large follow-up study found that universal screening for GBS and giving antibiotics when positive was more effective than giving antibiotics for “other” risk factors
- There are pros and cons to this approach

See ebbirth.com/groupbstrep

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Premature Rupture of Membranes (PROM)

FYI: It's not a dance!

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MYTH:

If you have term PROM and don't get induced, you or your baby will have an infection.

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Risks of PROM

Chorioamnionitis (4-8%) before GBS testing era

- Def = Inflammation of the membranes
- Diagnosis = Maternal temperature >100.4 PLUS at least 1-2 other signs of infection

Infection in the baby (2-3%)

- In research, defined as signs and symptoms of infection PLUS at least one positive diagnostic test (ex. blood cultures)

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Which of the following increase the risk of the newborn having an infection after PROM? (select all that apply)

- More cervical exams
- GBS carrier
- Chorioamnionitis
- Labor takes 48+ hours to start

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The Hannah et al. "Term PROM" Study

5,041 low-risk participants with term PROM
 6 different countries, years 1992-1995

Participants assigned to one of four groups:

1. Immediate induction with Pitocin
2. Immediate induction with prostaglandin gel
3. Waiting for up to 3 days (followed by Pitocin if needed)
4. Waiting for up to 3 days (followed by prostaglandin gel if needed)

Hannah et al. (1996). N Engl J Med 334(16): 1005-1010

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Waiting = Expectant Management

Could wait at home or in the hospital
 Checked temperature 2x/day
 Reported fever, change in color or smell of fluid, or other problems

Induced if they developed complications, if requested by the pregnant person, or if labor did not start after 4 days

Antibiotics given per health care provider

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Findings

No difference in:

- Cesarean rates (13.7-15.2%)
- Instrumental delivery rates
- Newborn infection rates
- Perinatal death rates
- Apgar scores

The Pitocin induction group had:

- Fewer cases of chorio (4% vs 8.6%)
- More likely to have <4 cervical exams
- Fewer cases of postpartum fever (1.9% vs 3.6%)
- Shorter time until active labor (median of 5 hrs vs 17.3 hrs)
- Shorter hospital stay before birth
- Higher satisfaction (95% vs 87%)

Hannah et al. (1996)

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Limitations of this study

Very loose definition of chorio

- Temp of 99.5 at least twice OR a single temp of 100.4 OR elevated WBC count OR foul-smelling amniotic fluid

Not large enough to detect true differences in mortality (findings may be due to chance)

- Four perinatal deaths, all in the waiting groups
- Causes: low oxygen, GBS infection, birth trauma

Hannah et al. (1996)

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Cochrane Review

23 randomized trials (number of participants = 8,615)

- 10 compared expectant mgmt vs. oxytocin; 12 compared expectant mgmt vs. misoprostol or prostaglandin E2

Only 2 studies screened and treated for GBS (n = 320)

Overall quality of evidence was low

About half of the participants were from the TermPROM study

Middleton et al. (2017). Cochrane Review CD005302

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Cochrane Review

Immediate induction led to:

- Shorter durations until birth
- Less likely to experience maternal infection (low-quality evidence)
- No increase in risk of Cesarean (low-quality evidence)
- Infants less likely to need antibiotics after birth; fewer NICU admissions
- Higher rate of uterine tachysystole (4 studies)

No difference between groups with:

Risk of serious maternal infection (very low quality), definite newborn infection (very low quality) or perinatal mortality (moderate-quality)

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Difficult to “generalize” the results

“The external validity of the results from these meta-analyses for contemporary clinical practice must be interpreted cautiously due to the low rates of GBS colonization detection and prophylactic antibiotic use, as well as to the inconsistency of the definitions of neonatal infection in these RCTs.”

Delorme et al. (2021)

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ACNM position statement on PROM (2021)

If certain criteria are met, families can be supported in choosing expectant management as a safe option:

- Term, uncomplicated, singleton pregnancy with fetus in head-first position
- Clear amniotic fluid
- No infections; GBS negative
- No fever
- Reassuring fetal heart rate
- No vaginal exam at baseline; keep vaginal exams to a minimum

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ACOG Practice Bulletin on PROM (2020)

Note from EBB: Recommendations have swung back and forth even though evidence hasn't really changed.

"Labor induction should be recommended" with term PROM (Level B: limited/inconsistent scientific evidence) although expectant management for a 12-24 hours can be offered.

GBS prophylaxis should begin immediately if indicated; also, induction is recommended with term PROM and GBS+.

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Association of Ontario Midwives Guidelines (2019)

For term PROM, discuss the risks and benefits of both expectant management and induction of labor.

In the absence of abnormal findings and when vaginal exams are avoided before the onset of active labor, expectant management and induction are both appropriate.

Avoid digital vaginal exams whenever possible.

Recommend induction at 18+ hours if GBS+

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Waterbirth

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What is the main barrier to waterbirth in most hospitals?

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MYTH:
Waterbirth has no benefits; it only poses risks for newborns.

Families should be cautioned against water birth during and past the second stage of labor, in the absence of any current evidence to support maternal or neonatal benefit and with reports of serious and fatal infectious outcomes in infants. Midwives and obstetricians offering this option must ensure that appropriate infection-control strategies (including rigorous cleaning and disinfection) are in place to reduce risk of infection.

Adopting Pediatric Care
American Academy of Pediatrics
COMMITTED TO THE HEALTH OF ALL CHILDREN

Risks of Infectious Diseases in Newborns Exposed to Alternative Perinatal Practices
Shaw, Aulisio, et al. AAP. Acad J Obstet Gynecol. 2017. 216(5): 927-932. doi:10.1016/j.ajog.2017.07.018

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AAP and ACOG vs. Waterbirth

- The American Academy of Pediatrics (AAP) and American Congress of Obstetricians and Gynecologists (ACOG) have a long history of opposing waterbirth
- In contrast, the American College of Nurse Midwives , American Association of Birth Centers, Royal College of Obstetricians and Gynaecologists, and Royal College of Midwives endorse waterbirth a safe option

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Newest Research on Waterbirth

- Very difficult to do randomized trials
- Largest and highest-quality study on waterbirth to date by Bovbjerg et al.
- Examined 17,530 waterbirths and a matched cohort of 17,530 land births, along with many health outcomes
 - Low-risk births at homes or freestanding birth centers
 - Cared for by midwives

Bovbjerg et al. (2022)

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Significant Results: Benefits of Waterbirth

Health outcome	Waterbirths	Land births
Postpartum hemorrhage	2.38%	2.99%
Postpartum transfer to hospital	2.05%	2.5%
Severe perineal tear (3 rd -4 th)	0.75%	0.84%
Newborn transfer to hospital	1.39%	1.65%
Newborn respiratory distress	1.49%	1.61%
Newborn hospitalization	3.39%	3.58%
Newborn death	0.28 per 1,000	0.51 per 1,000

Bovbjerg et al. (2022)

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Significant Results: Risks of Waterbirth

Health outcome	Waterbirths	Land births
Uterine infection postpartum	0.31%	0.25%
Umbilical cord avulsion	0.57%	0.37%

For more info on how to lower the risk of umbilical cord avulsion or tearing, check out EBB Podcast #258

Bovbjerg et al. (2022)

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For every 1,000 waterbirths in a community...

- 6 postpartum uterine infections
- 60 fewer postpartum hemorrhages of >1,000 mL
- 44 fewer postpartum transfers to the hospital
- 8 fewer severe perineal tears
- 20 cases of umbilical cord tearing
- 12 fewer cases of newborn respiratory distress
- 26 fewer newborn transfers and 20 fewer NICU stays

Bovbjerg et al. (2022)

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Case studies on newborn infections

- Meta-analyses of observational studies have also found no increased risk of newborn infection with waterbirth
- However, there are case studies of rare water-borne infections
- *Pseudomonas*– hospitals should take frequent cultures from the birthing pool system and heat-disinfect hoses (or use new ones)
- *Legionella*– Spa-like pools can be quite difficult to disinfect; rigid or inflatable tubs filled with fresh water are safer

Taylor et al. (2016); Vanderlaan et al. (2017)

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Today we covered:

1. Expectant management for PROM ebbirth.com/PROM
2. Group B Strep and the microbiome ebbirth.com/groupbstrep
3. Benefits and risks of waterbirth ebbirth.com/waterbirth

To learn more (and download a free 1-page handout on the evidence), visit the Signature Articles for each of these topics!

New research will be added to PROM and Waterbirth later in 2023!

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Big Announcement!

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Horizontal lines for notes.

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- Breakout rooms for diving into deep discussion
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Join us on our next call about “Serving your niche” on April 25!

Topic of Discussion	Scheduled Calls	Recommended Learning Activities for After Each Call
1st Call Overview of Doula Mentorship	March 26, 2023 April 27, 2023 June 2023	Read the Evidence Based Birth® Doula Mentorship Overview Evidence Based Birth® Doula Mentorship Overview
Who's in Your Niche?	April 25, 2023 June 2023	Building a Birth Business Read the Evidence Based Birth® Doula Mentorship: Birth, Not Doula to Business Course
Website Basics	May 23, 2023 June 2023	Website Optimization for Birth Workers Read the Evidence Based Birth® Doula Mentorship: September 2022 Monthly Tutorial
Legal Agreements	June 27, 2023 June 2023	Doula Support Read the Evidence Based Birth® Doula Mentorship: September 2022 Monthly Tutorial
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Question & Answer

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- Note: Older references are used when we do not have newer data on a topic or when we are referencing an important historical study.
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