Compassionate Care Midwifery Services
Informed Choice and Consent for Group B Strep (GBS) Screening & Treatment

What is Group B Strep (GBS)?
Group B Strep (GBS) is a type of bacteria that lives in the digestive and genital tracts of normal, healthy people. Roughly 20% of all pregnant women will screen positive for GBS. You can have GBS without having any symptoms. ***It is not a sexually transmitted disease (STD)***. During labor and birth, GBS bacteria can be passed on to the baby. GBS is a transient bacteria; it can come and go during the course of a pregnancy. Having GBS in a prior pregnancy does not necessarily mean you will have it in future pregnancies and vice versa.

How do you test for GBS?
The Centers for Disease Control (CDC) recommends that **all** pregnant women have a screening test for GBS between 35 to 37 weeks of pregnancy. Screening for GBS is s fast, simple procedure that can be done by your midwife or women can do it themselves in the bathroom. The screen involves collecting vaginal secretions with a long cotton swab (similar to a Q-tip). If you choose to be screened you are not obligated to have any kind of treatment for GBS, you can choose to be screened simply for your own informational purposes.

What if my GBS screen is positive?
To reduce the chance that the bacteria could be passed to your baby during labor, the CDC recommends GBS positive women receive an antibiotic through a vein (IV) during labor. Penicillin is the most common antibiotic that is given. The antibiotics help during labor only-they can't be taken orally or before labor begins because the bacteria can grow back quickly.

What if I'm allergic to penicillin?
If you are allergic to penicillin let your midwife know at the time the culture is taken. If GBS is isolated from your culture, susceptibility testing for other antibiotics (clindamycin and erythromycin) will be done.

Risk Factors for GBS disease in the newborn
It is not clearly understood why some babies become sick while others do not. We do know that several risk factors (listed below) are known to increase the risk of infection. However, 60% of all cases of GBS infection at birth occur in term babies with no risk factors:

- Preterm Birth (before 37 weeks)
- Prolonged rupture of membranes (more than 18 hours before birth)
- Fever during labor
- Baby who weighs less than 5 ½ pounds
- Prior baby with GBS infection
- GBS detected in the urine during pregnancy

How does GBS disease affect newborns?
Most babies do not become sick from GBS, but a small number (1-2%) do acquire a very serious GBS infection. The most common health problems associated with GBS infection in the newborn are **Sepsis** (blood infection), **pneumonia**, and **meningitis**. It can also cause **death of a newborn or mother**. When illness occurs within the first week of life it is called early-onset disease. In the year 2001, there were about 1,700 babies in the U.S. who got early-onset GBS disease. If it occurs after the first week of life then it is called late-onset GBS disease.

How effective is antibiotic therapy?
A woman who tests positive for GBS and receives antibiotics during labor has a 1 in 4000 chance of passing GBS to her baby. A woman who tests positive for GBS and does not get antibiotics during labor has a 1 in 200 chance of her baby developing GBS.

What are the risks of taking antibiotics to prevent GBS disease in my newborn?

- Anytime antibiotics are given there is the risk of allergic reaction. About 1 in 10 people will have a minor reaction, such as itchy skin rash. About 1 in 10,000 will have a more serious reaction, which might include irritability, difficulty breathing, and convulsions. About in 100,000 will have a fatal reaction.
- Some women may develop a secondary yeast infection or other adverse reaction from the antibiotic. With a yeast infection, newborns are more susceptible to thrush from contact with the yeast.
- Widespread antibiotic use contributes to the increasing prevalence of antibiotic resistant "super-bugs," which can potentially infect baby.
- Small risk of discomfort or bruising at the injection site.

Are there any alternative treatments?
Due to the growing concern over the effects of antibiotics on the human body, and the increasing prevalence of antibiotic resistant bacteria, many consumers, midwives, and researchers have begun to experiment with alternative GBS treatments. Some midwives have had success at eliminating GBS prior to labor with the following regimen twice a day, with breakfast and dinner:

- Acidophilus (or other probiotic containing lactobacillus, bifidus, etc.)
- Echinacea - 350 mg capsules - two capsules (Note that some people are allergic to Echinacea - this is best used in the last couple of weeks of pregnancy only.)
- Garlic - 580 mg capsules - two capsules
- Vitamin C - 500 mg with 200 mg bioflavonoids
- Grapefruit seed extract - 15 drops

GBS cultures are repeated weekly to determine if treatment is working. Treatment is continued until labor starts.

Please be aware that while some alternative treatments are supported by medical literature and are in use *outside* the US, they **are *not* medically accepted treatments for GBS infection in the US**. Vaginal flushing/washing with a **chlorhexidine** solution during labor is widely used in Europe, and is an accepted protocol for midwifery clients.

Research on Chlorhexidine Vaginal Flushing
A European Approach – Chlorhexidine Vaginal Flushings During Labor
(The following information is taken from Research Updates for Midwives, Gail Hart 2004)

If strep is a natural flora of the recto-genital area, and not a systemic disease, then we theoretically "should" be able to prevent the baby from becoming contaminated as he passes through the birth canal. Simple washing routines have worked to lower the transmission of hepatitis and HIV. In the pre-antibiotic days they were quite effective in reducing gonorrhea and other STDs. Would a germicidal wash or douche be effective against strep? The European answer is an unequivocal "Yes"!

After nearly two decades, the Hexidine Group released their results of a large study recently. Researchers say that several methods show promise; a vaginal germicidal douche in the last weeks of pregnancy; an application of germicidal gel in labor; or a "rinse" in labor. The germicide most tested was chlorhexidine (hexachlorophene), but povidone iodine is also being tested. (Natural practitioners might wonder about herbal equivalents).

"*Germicidal washings…display the same efficacy as ampicillin in preventing vertical transmission of group B streptococcus. Moreover, the rate of neonatal E. Coli colonization was reduced by chlorhexidine.*

J Matern Fetal Med 2002 Feb; 11(2):84-8

Chlorhexidine vaginal flushings versus systemic ampicillin in the prevention of vertical transmission of neonatal group B streptococcus, at term. *A total of 244 group B streptococcus-colonized mothers at term (screened at 36-38 weeks) were randomized to receive either 140 ml chlorhexidine 0.2% by vaginal flushings every 6 h or ampicillin 2 g. intravenously every 6 h until delivery. …*

RESULTS: A total of 108 women were treated with ampicillin and 109 with chlorhexidine. Their ages and gestational weeks at delivery were similar in the two groups. Nulliparous women were equally distributed between the two groups (ampicillin, 87%; chlorhexidine, 89%). Clinical data such as birth weight … Apgar scores … were ***similar for the two groups, as was the rate of neonatal group B streptococcus colonization (chlorhexidine, 15.6%; ampicillin, 12%). Eschereichia coli, on the other hand, was significantly more prevalent in the ampicillin (7.4%) than in the chlorhexidine group (1.8%, p < 0.05).*** *Six neonates were transferred to the neonatal intensive care unit, including two cases of early-onset sepsis (one in each group).*

CONCLUSIONS: In this carefully screened target population, intrapartum vaginal flushings with chlorhexidine in colonized mothers display the ***same efficacy as ampicillin*** *in preventing vertical transmission of group B streptococcus. Moreover, the rate of neonatal* ***E. Coli colonization was reduced*** *by chlorhexidine.*

PMID: 11995801 J Matern Fetal Med 2002 Feb;11(2):84-8

Chlorhexidine vaginal flushings versus systemic ampicillin in the prevention of vertical transmission of neonatal group B streptococcus, at term. Here is a large study. The vaginal rinse was done with a peri-bottle.

" a trial of randomized, blinded placebo controlled douching with either 0.2% chlorhexidine or sterile saline was performed on 1130 women in vaginal labour… In the double blind study, vaginal douching with chlorhexidine significantly reduced

the vertical transmission rate … The lower rate of bacteria isolated from the latter group was accompanied by a significantly reduced early infectious morbidity in the neonates (P < 0.05% confidence interval 0.00-0.06). This finding was particularly pronounced in Str. Agalactiae infections (P< 0.01). In the early postpartum period, fever in the mothers was significantly lower in the patients offered vaginal disinfection … A parallel lower occurrence of urinary tract infections was also observed. ***This prospective controlled trial demonstrated that vaginal douching with 0.2% chlorhexidine during labour can significantly reduce both maternal and early neonatal infectious morbidity.*** *The squeeze bottle procedure was simple, quick, and well tolerated. The beneficial effect may be ascribed both to mechanical cleansing by liquid flow and to the disinfective action of chlorhexidine."*

Int J Antimicrob Agents 1999 Aug;12(3):245-Vaginal disinfection with chlorhexidine during childbirth

For more information on GBS and treatments:
http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5111a1.htm
http://www.aafp.org/afp/20030301/practice.html
http://www.gentlebirth.org/archives/gbs.html

Symptoms of GBS infection in a newborn can be subtle and may mimic less serious concerns. It is important to watch for these symptoms since treatment does not guarantee that a baby will not become infected, and treatment does not prevent late-onset GBS. Babies may experience early or late-onset of GBS.

The signs and symptoms of early onset GBS include:

- Signs and symptoms occurring usually within hours of delivery
- Breathing problems, heart and blood pressure instability
- Gastrointestinal and kidney problems
- Inability to maintain stable baby temperature
- Sepsis, pneumonia and meningitis are the most common complications
- Lack of interest in feeding/refusal to nurse

Newborns with early-onset are treated the same as the mothers, which is through intravenous antibiotics.

The signs and symptoms of late-onset GBS include:

- Signs and symptoms occurring after a week of delivery but within a few months of delivery
- Meningitis is the most common symptom

Late-onset GBS is not as common as early-onset

References:

"Prevention of Perinatal Group B Streptococcal Disease, Revised Guidelines," Centers for Disease Control and Prevention, Morbidity and Mortality Weely Report, August 16, 2002/Vol.51/No.RR-11

"Neonatal sepsis and death caused by resistant Escherichia coli: possible consequences of extended maternal ampicillin administration," Terrone DA, Rinehart BK, Einstein MH, Britt LB, Martin JN Jr, Perry KG, Am J Obstet Gynecol 1999 June;180(6 Pt 1):1345-8

"The importance of prenatal exposures on the development of allergic disease: a birth cohort study using the West Midlands General Practice Database," McKeever TM, Lewis SA, Smith C, Hubbard R., Am J. Respir Crit Care Med 2002 Sept 15;166(6):827-32.

Cunningham, MacDonald, Grant, Leveno, Gilstrap, Hankins, Clark, Williams Obstetrics, 20th Ed., Appleton & Lange, Stamford, CT., 1997.

Informed Choice Regarding GBS Testing and Treatment:

"I acknowledge that I have been offered information and have read and understand the information provided to me on GBS and treatment options, understand the possible risks of GBS colonization and infection of my baby, including permanent neurological damage or death, and have had the opportunity to ask questions of my midwife.

I understand that if I refuse testing and transport of me or of my baby during labor or following birth becomes necessary that my baby will be assumed to have GBS and will likely be treated with IV antibiotics prophylactically.

I understand that I can change whatever decision I make at any time (acknowledging that a result will take approximately 48 hours to obtain from collection of sample), including testing and accepting or refusing treatment.

Please Initial all that apply:

Testing Options:

- ❑ I **do not** want to be tested for Group Beta Strep. ____initials
- ❑ I **want to** be tested for Group Beta Strep. ____initials

Treatment Options:

- ❑ If I test positive for Group Beta Strep prior to labor I agree to **vaginal flushing** with a .2% chlorhexidine solution every 6 hours during labor. ____initials
- ❑ If I test positive for Group Beta Strep I choose to have **no treatment**. ____initials
- ❑ If I test positive for Group Beta Strep I choose **to take IV antibiotics**. I understand that I may need to see a physician for a prescription of IV antibiotics to be administered by my midwife during labor. If my midwife has orders for IV antibiotics at the time of my labor and birth, she can administer the IV antibiotics without the need for me to see a physician for a prescription. _____initials

Waiver: In consideration of having a Group B Strep Disease Screening Test and treatment if positive, I, for myself, my heirs, personal representatives or assigns do **hereby release, waive, discharge, and covenant not to sue** Holly Shearman, LM, CPM, Compassionate Care Midwifery Services, its employees and agents from any and all claims resulting in personal injury, accidents, or illnesses (including death) arising from refusing testing and/or treatment. I acknowledge that I am signing this agreement freely and voluntarily.

Client's name (print)	Signature	Date
Partner's name (print)	Signature	Date
Practice Representative (print)	Signature	Date