



# HBMS ~ Prenatal Testing & Diagnostics Schedule

## Informed Consent ~ Informed Declination

### FIRST TRIMESTER TESTING

<p>Date _____</p> <p style="text-align: center;">Consent</p> <p>Circle one:</p> <p style="text-align: center;">Decline</p> <p>Client Initial _____</p> <p>Testing Date _____</p> <p><input type="checkbox"/> Tests Results Reviewed with Client</p> <p>★ This test is <b>INCLUDED</b> in our standard Prenatal Profile blood work.</p>	<p><b>Blood Type, Rh Factor w/ Antibody Screen [ABO-Rh w/ Antibody]</b></p> <p>Blood typing is a laboratory test that identifies blood group antigens (substances that stimulate an immune response) belonging to the ABO blood group system. The test classifies blood into four groups designated A, B, AB, and O. Parents who are expecting a baby have their blood typed to diagnose and prevent <b><i>Hemolytic Disease of the Newborn (HDN)</i></b>, a type of anemia, also known as <b><i>Erythroblastosis fetalis</i></b>. Babies who have a blood type different from their mother's are at risk for developing this disease. Blood typing of the mother is also important in the unlikely event that she requires a blood transfusion as a result of a complication of delivery, where she loses too much blood, known as a hemorrhage.</p> <p>Rh is an antigen. The full name for this antigen is Rhesus Factor. Rh typing is especially important during pregnancy because a mother and her fetus could be Rhesus incompatible. If the mother is <b>Rh Negative (RH-)</b> but the father is <b>Rh Positive (Rh+)</b>, their fetus may be <b>Positive</b> for the Rh antigen (Rh+). As a result, the mother's body <u>could</u> develop antibodies against the <b>Rh Positive</b> antigen of the fetus. Maternal antibodies may cross the placenta and cause destruction of the baby's red blood cells, resulting in a condition known as hemolytic disease of the fetus and newborn (HDN). To prevent development of Rh antibodies, an <b>Rh Negative</b> mother is treated with an injection of Rh immune globulin (RhoGAM) during her pregnancy and again after delivery <b>IF</b> the baby is <b>Rh Positive</b>. The Rh immune globulin "masks" any Rh antigen from the fetus that the mother may be exposed to during her pregnancy and delivery and prevents her from becoming sensitized and developing antibodies against the Rh antigen. Problems arising from Rh sensitization have become very rare since the Rh immune globulin vaccine was developed. <b>A second Antibody Screen is offered about 28 weeks of pregnancy.</b></p>
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Consent/Declination  
Indicated on the  
previous page.

### Complete Blood Count ~ continued...

- **Mean Corpuscular Hemoglobin (MCH)** is a calculation of the average amount of oxygen-carrying hemoglobin inside a red blood cell. Macrocytic RBCs are large so tend to have a higher MCH, while microcytic red cells would have a lower value.
  - **Mean Corpuscular Hemoglobin Concentration (MCHC)** is a calculation of the average concentration of hemoglobin inside a red cell. Decreased MCHC values (hypochromia) are seen in conditions where the hemoglobin is abnormally diluted inside the red cells, such as in iron deficiency anemia and in thalassemia. Increased MCHC values (hyperchromia) are seen in conditions where the hemoglobin is abnormally concentrated inside the red cells, such as in burn patients and hereditary spherocytosis, a relatively rare congenital disorder.
- Red cell distribution width (RDW) is a calculation of the variation in the size of your RBCs. In some anemias, such as pernicious anemia, the amount of variation (anisocytosis) in RBC size (along with variation in shape – poikilocytosis) causes an increase in the RDW.

Date \_\_\_\_\_

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Tests Results Reviewed  
with Client

★ This test is **INCLUDED** in  
our standard Prenatal Profile  
blood work.

### Rubella Titer [German Measles]

Rubella or German measles is a milder form of ordinary measles. The rubella titer is used to:

- **confirm** the presence of adequate protection against the rubella virus,
- **detect** a recent or past infection,
- **identify** those who have never been exposed or vaccinated,
- **verify** that all pregnant women and those planning to become pregnant have a sufficient amount (titer) of rubella antibodies to protect them from infection.

Both the IgM and IgG antibody tests may be ordered on a person, pregnant or not, who has symptoms suspicious of a Rubella infection. They may also be ordered on a newborn that is suspected to have become infected during pregnancy or that presents with congenital birth defects that the doctor suspects may be due to a rubella infection.

A pregnant woman who gets Rubella during the first 5 months of pregnancy can pass the disease on to her fetus (8 out of 10 exposed fetuses will become infected in-utero). If the baby gets Rubella during the first 12 weeks of pregnancy, it will be born with many problems. It may be blind, deaf, or have heart damage. If the baby gets rubella between 16 and 20 weeks of pregnancy, it will be born deaf. 1 out of 10 babies who are born with Rubella will die during the first 12 months of life. There is no treatment for Rubella in babies. The damage that happens to the fetus will last for the child's whole life.

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### Hepatitis B [Hep B or HBV]

Hepatitis B is caused by a virus that attacks the liver. The virus, which is called Hepatitis B virus (HBV), can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death. HBV is spread through having unprotected sex with an infected person, by sharing drugs, needles, through needle sticks or sharps exposures on the job, or from an infected mother to her baby during birth. Hepatitis B is not spread through food or water, sharing eating utensils, breastfeeding, hugging, kissing, coughing, and sneezing or by casual contact.

All pregnant women should be tested for Hepatitis B surface antigen (HBsAg) during an early prenatal visit in each pregnancy, even if they have been previously vaccinated or tested.

A Hepatitis B infected pregnant woman has a chance of infecting her fetus. Whether the baby will get the virus depends on when infection occurred. If it was early in pregnancy, the chances are less than 10% that the baby will get the virus. If it was late in pregnancy, there is up to a 90% chance that the baby will be infected. Hepatitis can be severe in babies. It can threaten their lives. Even babies who appear well may be at risk for serious health problems.


● A POSITIVE Hepatitis B titer will "RISK OUT" a client from having a home birth due to potential risk of complications to her baby and the risk of pathogen transfer to the provider.

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<p>Date _____</p> <p style="text-align: center;">Consent</p> <p>Circle one: Decline</p> <p>Client Initial _____</p>	<p><b>Urinalysis</b></p> <p>The urinalysis is used as a screening and diagnostic tool because it can help detect substances or cellular material in the urine associated with different metabolic and kidney disorders. It is ordered widely and routinely to detect any abnormalities and evidence of bacterial infection that should be followed up on. Often, substances such as protein or glucose will begin to appear in the urine before patients are aware that they may have a problem.</p>
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Testing Date _____  <input type="checkbox"/> Tests Results Reviewed with Client   <div style="text-align: center;">   <b>Consent/Declination indicated on the previous page.</b> </div>	<b>Urinalysis ~ continued...</b>  Urinalysis is used to detect urinary tract infections (UTI) and other disorders of the urinary tract. Periodic urine tests during pregnancy are used to assess bladder or kidney infections, diabetes, malnutrition, dehydration, and preeclampsia by screening for high levels of sugars, proteins, ketones, and evidence of bacteria.  <b>Glucose:</b> High levels of sugars may suggest hypoglycemia (low blood sugar), which is quite common in pregnancy; or hyperglycemia (high blood sugar) also referred to as gestational diabetes. Follow-up blood tests can help determine the proper metabolism of sugars.  <b>Ketones:</b> Ketones occur when the body is breaking down fats instead of carbohydrates for energy. High levels of ketones indicate inadequate calorie intake and/or dehydration.  <b>Bacteria:</b> High levels of leukocytes (white blood cells) and the presence of nitrates indicate the possibility of a <b>Urinary Tract Infection (UTI)</b> . UTI-causing bacteria make an enzyme that changes urinary nitrates to nitrites. Follow-up urine cultures can confirm in-office testing.  <b>Protein:</b> Trace and moderate levels of protein in urine can indicate malnutrition or UTI. Increasing higher levels of protein (proteinuria) found later in pregnancy, combined with high blood pressure, indicate the possibility of pre-eclampsia, a serious complication of pregnancy.
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Date _____  <div style="text-align: center;">           Consent            Circle one:            Decline         </div> Client Initial _____ Testing Date _____  <input type="checkbox"/> Tests Results Reviewed with Client	<b>Chlamydia [vaginal culture]</b>  Chlamydia is the most frequently reported bacterial sexually transmitted disease (STD) in the United States. Chlamydia is caused by the bacterium, <i>Chlamydia trachomatis</i> , which can damage a woman's reproductive organs. Even though symptoms of Chlamydia are usually mild or absent, serious complications that cause irreversible damage, including infertility, can occur "silently" before a woman ever recognizes a problem. Chlamydia also can cause discharge from the penis of an infected man.  Chlamydia can be passed from an infected mother to her baby during vaginal childbirth. In pregnant women, there is some evidence that untreated Chlamydial infections can lead to premature delivery. Babies who are born to infected mothers can get Chlamydial infections in their eyes and respiratory tracts. Chlamydia is a leading cause of early infant pneumonia and conjunctivitis (pink eye) in newborns.
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Date _____  <div style="text-align: center;">           Consent            Circle one:            Decline         </div> Client Initial _____ Testing Date _____  <input type="checkbox"/> Tests Results Reviewed with Client	<b>Gonorrhea [vaginal culture]</b>  Gonorrhea is a sexually transmitted disease (STD) is caused by <i>Neisseria gonorrhoeae</i> , a bacterium that can grow and multiply easily in the warm, moist areas of the reproductive tract, including the cervix, uterus, and fallopian tubes in women, and in the urethra in women and men. Left untreated, this infection can cause serious and permanent health problems. Gonorrhea can also infect the mouth, throat, eyes, and anus.  If a pregnant woman has Gonorrhea, she may give the infection to her baby as the baby passes through the vagina during birth. This can cause blindness, joint infection, or a life-threatening blood infection in the baby. Treatment of Gonorrhea, as soon as it is detected in pregnant women, will reduce the risk of these complications. Pregnant women should consult a health care provider for appropriate examination, testing, and treatment, as necessary. All pregnant women at risk for Gonorrhea or living in an area in which the prevalence of <i>Neisseria gonorrhoeae</i> is high should be tested at the first prenatal visit. A repeat test should be performed during the third trimester for those at continued risk.
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**Second Trimester Testing**

Date _____  <div style="text-align: center;">           Consent            Circle one: Decline         </div> Client Initial _____	<b>Maternal Serum [AFP] and Tetra Screen [Quad] [16-18 weeks]</b>  Maternal serum screening can identify pregnant women who are "at an increased risk" for having a baby with certain birth defects. At 15 - 21 weeks of pregnancy, a blood test can determine her risk of having a baby with an Open Neural Tube Defect (ONTD), Down's Syndrome, or Trisomy 18. AFP & Tetra combines four different laboratory markers to
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Testing Date _____ <input type="checkbox"/> Tests Results Reviewed with Client  <b>↑ Consent/Declination indicated on the previous page.</b>	<b>Maternal Serum [AFP] and Tetra Screen [Quad] ~ continued...</b>  offer enhanced prenatal screening and increased detection efficiency for Down's Syndrome.  AFP-Tetra is a screening test that measures four proteins in a pregnant woman's blood: AFP (alpha-fetoprotein), hCG (human chorionic gonadotropin), uE3 (unconjugated estriol), and dimeric inhibin A (DIA). The levels of these proteins, combined with clinical information about the pregnant woman, such as: weight, race, and whether she takes insulin, can help identify a woman who has a higher chance of having a baby with certain birth defects.
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Date _____  Consent Circle one: Decline  Client Initial _____ Testing Date _____ <input type="checkbox"/> Tests Results Reviewed with Client  <div style="background-color: yellow; padding: 5px;"> <b>● This test is recommended ONLY when it is medically indicated due to the risk of miscarriage and other complications.</b> </div>	<b>Amniocentesis [14-20 weeks]</b>  Amniocentesis is a test in which a trained specialist, such as a perinatologist or an obstetrician, removes a small amount of fluid from around the fetus via a needle puncture into the uterus. There are specific risks associated with this test that should be discussed with your physician.  Using ultrasound as a guide, a needle is inserted through the uterine wall and into the amniotic sac that surrounds the baby. A few tablespoons of amniotic fluid are removed. Because this fluid contains skin cells from the fetus, the cells chromosomes are analyzed in a lab. This test can help to diagnose more than 99% of Down's Syndrome, Trisomy 18, as well as other numeric and structural chromosome problems. AFP is also measured in the amniotic fluid and, if open Spina Bifida is suspected, a spinal protein called AChE (acetylcholinesterase) is also measured. This combination of tests can help to diagnose more than 98% of cases of open Spina Bifida.  Miscarriage is the primary risk related to amniocentesis. The risk of miscarriage ranges from 1 in 400 to 1 in 200. In facilities where amniocentesis is performed regularly, the rates are closer to 1 in 400. Miscarriages can occur because of infection in the uterus, the water breaks or labor is induced prematurely. Although extremely rare, it is possible for the needle to come in contact with and injure the baby.
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Date _____  Consent Circle one: Decline  Client Initial _____ Testing Date _____ <input type="checkbox"/> Tests Results Reviewed with Client  <div style="background-color: yellow; padding: 5px;"> <b>● This test is recommended ONLY when it is medically indicated, due to increasing concerns among researchers regarding its safety and the potential for damage at the cellular level from thermogenic (heating) effect &amp; high decibel levels.</b> </div>	<b>Ultrasound for Fetal Anomalies [Anatomy Scan] [18-22 weeks]</b>  Ultrasound is the use of high frequency sound waves (SONAR) and a computer to create images of the developing fetus. Ultrasound can be an important tool to help evaluate various conditions and complications. Ultrasound should be used with caution and utilized only when a medical indication presents during the pregnancy. While ultrasound is generally considered safe by the obstetrical community for mother and baby, there continues to be concerns about the thermogenic (heating up) effect ultrasound has on cells and the actual audible sound ultrasound makes in the uterus (100-120 decibels). Researchers caution the over-use of prenatal ultrasound and ACOG recommends that ultrasound ONLY be used when medically indicated. They further discourage the use of 3 or 4-D ultrasound imaging "Portrait Studios" for the creation of prenatal photos.  It is uncertain whether low-risk pregnant women benefit from routine ultrasound exams. A major study reported in 1993 found no significant difference (in terms of the rate of preterm delivery, infant birth weight, serious complications in the newborn period or infant death) between two groups of low-risk women — those who had two routine ultrasound exams and those who had an ultrasound only because there was some medical reason for it. Researchers continue to study the benefits of routine ultrasound in low-risk pregnancies. In low-risk women, ultrasound is good at ruling out problems, but not as good at detecting them. Currently, a routine ultrasound exam detects 50-75% of all structural birth defects. A number of studies have shown that ultrasound is most accurate when done by an experienced examiner at a major diagnostic center rather than with an in-office provider.  Besides missing some birth defects, a routine ultrasound exam occasionally can suggest that a birth defect is present when none exists. Approximately 1 in 1,000 low-risk women is told that her baby may have a birth defect, when actually the baby does not. While follow-up exams often show that the baby is healthy, such false alarms can cause intense, unnecessary worry.
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### Third Trimester Testing

Date _____  Consent Circle one: Decline  Client Initial _____ Testing Date _____  <input type="checkbox"/> Tests Results Reviewed with Client	<p><b>Repeat Antibody Test [28 week for unsensitized Rh- clients]</b></p> <p>Rh is an antigen. The full name for this antigen is Rhesus factor. If a pregnant woman with Rh-negative blood has a baby with Rh-positive blood, Rh sensitization is a risk. This occurs when the baby's blood mixes with the mother's blood during delivery, causing the mother's immune system to produce antibodies against the baby's red blood cells in future pregnancies. This antibody response is called Rh sensitization and, depending on when it occurs, can destroy the fetus' red blood cells. Once sensitization occurs, the baby can develop mild to severe problems (called Rh disease, hemolytic disease of the newborn, or erythroblastosis fetalis). If untreated, complications from sensitization can, in rare cases, lead to the death of an Rh-positive baby.</p> <p>A woman with Rh-negative blood can receive a medication called Rh immune globulin (RhoGAM) that almost always prevents sensitization from occurring. Problems arising from Rh sensitization have become very rare since RhoGAM was developed.</p>
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Date _____  Consent Circle one: Decline  Client Initial _____ Testing Date _____  <input type="checkbox"/> Tests Results Reviewed with Client	<p><b>Gestational Diabetes [Hyper-Glycemia of Pregnancy] [24-28 weeks]</b></p> <p>All pregnant clients should be screened (evaluated) for gestational diabetes during their pregnancy. Screening may be done via patient history, clinical risk factors, and/or, when indicated, laboratory blood work using the 1-hour glucose tolerance test (1hr GTT).</p> <p>This test involves quickly drinking a sweetened liquid (Glucola), which contains 50 grams of glucose (sugar) <b>or</b> quickly eating 17 Brach's jelly beans. The body absorbs this glucose rapidly, causing blood glucose levels to rise within 30 to 60 minutes. After 1 hour, a blood sample is drawn from a vein in your arm. This blood sample is sent to a laboratory for evaluation. The blood test measures how the glucose solution was metabolized (processed) by your body.</p> <p>Another testing option is the 2-hour post-prandial glucose test (2hr PPGT). The 2hr PPGT blood test is done exactly 2 hours after eating a meal. Normally, before age 50, blood sugar levels should rise no higher than 140 mg/dL at 2 hours after eating. Clients who chose this testing modality will be given meal instructions to follow prior to coming into the office for testing.</p> <p><b>A blood glucose level of <math>\geq 140</math>mg/dL will identify 80% of mothers with gestational diabetes,</b> thus results of 135-140 mg/dL indicates a second screening test: the 3-hour glucose tolerance test (3hr GTT). This requires that you fast (not eat) before the test. During this test, your blood glucose level will be tested <b>four times</b> during a three-hour period after drinking the Glucola drink. If two of the four blood test results are abnormal, you are considered to have gestational diabetes. Collaboration with a physician and dietary modifications with advice of a registered dietician are recommended. Regular follow-up is necessary to evaluate the client for risk.</p>
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Date _____  Consent Circle one: Decline  Client Initial _____ Testing Date _____  <input type="checkbox"/> Tests Results Reviewed with Client	<p><b>Hemoglobin [Hgb], Hematocrit [Hct] &amp; Platelet Count [28-32 weeks]</b></p> <p>Hemoglobin and Hematocrit measure your potential for anemia and clotting. Those women who are anemic need to be identified well ahead of delivery so that treatment and therapy can improve their low blood count. Physiologic anemia can be problematic to the mother. The platelet count measures the blood's ability to clot. With a very low platelet count, a patient is at risk for bleeding to death; a woman will lose half a liter of blood on average at birth.</p> <p>Blood volume expansion during pregnancy is usually complete, with the red blood cell count increasing, by 28 – 32 weeks.</p>
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## **Group Beta Streptococcus [Group B Strep or GBS] [35-37 weeks]**

GBS is one of many, common flora (bacteria) that live in and on the human body without causing harm in healthy people. GBS develops in the intestine from time to time, so sometimes it is present and sometimes it is not. GBS is the most common cause of sepsis (blood infection) and meningitis (infection of the fluid and lining surrounding the brain) in newborns. GBS causes newborn pneumonia and is more common than other, better known, newborn problems such as rubella, congenital syphilis, and spina bifida. GBS causes severe invasive disease in young infants.

Most GBS infections in newborns occur within the first week of life and are designated **early-onset disease**. Late-onset infections occur in infants aged >1 week, with most infections evident in the first 3 months of life. Babies with invasive GBS disease usually present with sepsis or pneumonia, and less often contract meningitis, osteomyelitis, or septic arthritis. The proportion of infants with meningitis is higher among those with late-onset infections. When neonatal infections caused by GBS appeared in the 1970s, (prior to prenatal testing and intrapartum antimicrobial chemoprophylaxis) as many as 50% of babies died. **During the 1990s, the case-fatality ratio of early- and late-onset disease was 4% because of intrapartum antimicrobial chemoprophylaxis and advances in neonatal care.** This means that in the year 1990, of the 1,600 babies who became infected with GBS, **80 of those babies died.**

Intrauterine infection of the fetus results from ascending spread of GBS from the vagina of a colonized woman who is typically asymptomatic. Fetal aspiration of infected amniotic fluid can lead to stillbirth, neonatal pneumonia, or sepsis. Infants can also become infected with GBS during passage through the vagina, although the majority of infants who are exposed to the organism through this route become colonized on skin or mucous membranes but remain asymptomatic. In pregnant women, GBS can cause clinical infections, but most women have no symptoms associated with genital tract colonization. Urinary tract infections caused by GBS complicate 2%--4% of pregnancies. During pregnancy or the postpartum period, women can contract amnionitis, endometritis, sepsis, or rarely, meningitis caused by GBS. Fatalities among women with pregnancy-associated GBS disease are extremely rare.

GBS lives in our environment and in our bodies. Many people carry GBS in and on their bodies but do not become ill. These people are said to be "**colonized.**" Adults can be colonized in the bowel, genital tract, urinary tract, throat, or respiratory tract. 10 to 30% of pregnant women are colonized with GBS in the rectum or vagina. At the time of birth, babies are exposed to the GBS bacteria if it is present in the vagina. Full-term babies who are born to mothers who carry GBS in the vagina at the time of birth have a **1-in-200** chance of getting sick from GBS during the first few days after being born.

At 35 – 37 weeks of pregnancy, during a regular prenatal visit, you will collect a sample by swabbing the inside of the vagina with a sterile Q-tip. If GBS grows in the culture that is sent to the lab, you are considered "colonized" or Positive.

### **Pregnant women with the following conditions are at higher risk of having a baby with GBS disease:**

- previous baby with GBS disease
- urinary tract infection due to GBS
- GBS colonization late in pregnancy
- fever during labor
- rupture of membranes 18 hours or more before delivery
- labor or rupture of membranes before 37 weeks ("preterm")

### **Colonized women at highest risk are those with any of the following conditions:**

- fever during labor
- rupture of membranes 18 hours or more before delivery
- labor or rupture of membranes before 37 weeks ("preterm")

### **The CDC recommends that ALL women who are GBS Positive receive intravenous antibiotics during their labors.**

Because women who are colonized with GBS, but do not develop any of the above complications, have a relatively low risk of delivering an infant with GBS disease, the decision to take antibiotics during labor should balance risks and benefits. Penicillin is very effective in reducing the incidence of GBS disease in the newborn and is generally safe. However, there are risks associated with taking any medication and antibiotics specifically:

Consider the risk statistics: A colonized woman, with none of the conditions previously listed, has the following risks:

- 1 in 200 chance of delivering a baby with GBS disease if no antibiotics are given
- 1 in 10 chance, or lower, of experiencing a mild allergic reaction to penicillin (such as rash)
- 1 in 10,000 chance of developing a severe allergic reaction (anaphylaxis) to penicillin.

🔴 **Anaphylaxis requires immediate, emergency treatment and can be life-threatening.**

Although GBS can be easy to remove from the vagina, it is not as easy to remove from the intestine where it lives normally and without harm to you. Although GBS is not dangerous to you or your baby before labor commences, if you take antibiotics before you are in labor, GBS *may* return to the vagina from the intestine, as soon as you stop taking the medication. Therefore, the CDC recommends that I.V. (intravenous) penicillin be given during labor to help prevent infection of your baby. The one exception is that, occasionally, GBS can cause a urinary tract infection during pregnancy. If you get a GBS urinary tract infection, it should be treated at the time it is diagnosed, and then, per **CDC Guidelines**, you should receive antibiotics again when you are in labor.

Babies who develop GBS infections almost always do so **within 24 hours after birth**. Symptoms include difficult breathing, poor color, problems maintaining temperature (too cold/too hot), or extreme sleepiness that interferes with nursing. **GBS Disease of newborns occurs in less than 1% of all births, so it is considered RARE.** Three-fourths of all cases of Newborn GBS Disease occur in the first week of life ("early-onset disease") and most of these are apparent within a few hours after birth. Sepsis, pneumonia, and meningitis are the most common problems. Premature babies are more susceptible to GBS infection than full-term babies, but most (75%) babies who get GBS disease are full term. GBS disease may also develop in infants 1 week to several months after birth ("late-onset disease"). Meningitis is more common with late-onset GBS disease. About 50% of late-onset Newborn GBS Disease comes from their mothers; the source of infection for others with late-onset GBS disease is unknown, but is likely environmental.

There has been much research done in the area of the overuse of antibiotics in the health management of disease. It is unknown what sort of lasting effects the use of antibiotics in this manner may have on the newborn. At the very least, it can leave the newborn at risk for infections from other normal flora bacteria, E. coli which is penicillin resistant, but which is kept under control normally by the other normal flora in and on the body. Another consideration with routine use of antibiotics is the effect it has on the newborns ability to colonize his own gut with normal flora bacteria. These bacteria are essential for proper digestion of nutrients, good bowel function and health, and proper formation of normal Vitamin K (for blood clotting).

In midwifery, it is commonly believed that treating the GBS colonization with natural therapies is "a better way" to manage the potential threat. There are a number of natural therapies that have been used with success; it is really just a matter of finding which treatment works best for each client; with client compliance the next important factor:

**Immune system boosters – Take these ORALLY (by mouth) for two weeks prior to the GBS culture and then until labor/birth...**

- Probiotics, **Acidophilus with L. Bifidus** – 4 billion cells/dose (# doses: at each meal & bed time)
- Vitamin C – 500 mg with 200 mg Bioflavonoids/dose, once/day;
- Alfalfa – 3 tablets/dose, (take at breakfast and lunch time);
- Liquid Colloidal Silver – 15 drops/dose, 2/day
- Echinacea – 350 mg capsules, 2/day (total: 700 mg/dose),
- Garlic – 580 mg capsules, 2/day (total: 1160 mg/dose, take one at breakfast and at lunch),
- Golden Seal (only after 37 weeks) – 400 mg capsules, 2/day (total: 800 mg)
- Grapefruit Seed extract – 15 drops/dose, 2/day
- Cinnamon tea (only after 37 weeks) – as desired
- Nasturtium or Echinacea Tea (only after 37 weeks) – as desired

**Dietary Considerations – Be mindful to follow these recommendations for promoting healthy intestine (gut) flora...**

- Drink **8-10** glasses of water/day.
- Be sure your diet is high in **fiber** (see food recommendations/restrictions below).
- Eat plenty foods high in **Vitamin K**: leafy dark greens, whole grains such as oat bran or flax seed, black strap molasses, broccoli, cauliflower, egg yolks, and strawberries.
- Include low-sugar (lite) or plain **yogurt**, with **live/active cultures**, in your diet plan (Activia is one brand name).

- Increase **↑ Acid-forming foods** such as: dairy, fish, poultry, eggs, meats (except lamb) & shellfish, asparagus, olives, legumes, lentils, cranberries, plums, prunes, oatmeal, noodles, pasta. An Acid-based diet **INHIBITS** the growth of bacteria.
- Reduce **↓ Alkaline-forming foods** such as: citrus fruits (oranges, tangerines, grapefruit, lemons, limes, pineapples, and tomatoes), avocados, corn, potatoes, mushrooms, nuts, & seeds. An Alkaline-based diet **ENCOURAGES** bacterial growth.
- Reduce or limit your intake of **antacid medications** such as Tums, Maylox, Rolaids, etc. These products are alkaline-based and should be minimized during **GBS** treatment.

**Vaginal Treatments – These treatments are used VAGINALLY. Your midwife may have one she prefers over another.**

- Colloidal Silver treatments (dropped on a tampon - overnight)
- Grapefruit Seed Extract treatments (same as Colloidal Silver)
- Tea Tree Oil treatments (same as Colloidal Silver or Grapefruit Extract)
- Echinacea and/or Golden Seal douche/lavage
- Probiotics (acidophilus/Bifidus) capsules
- Glove of Garlic (wrapped in gauze, inserted vaginally as a tampon - overnight)
- Boric Acid capsules
- Hydrogen Peroxide douche/lavage
- Diluted Hibiclens & water douche/lavage (**Use in labor ONLY, with Bag of Water intact.**)

Any of these individual or combination treatments have been shown to reduce GBS colonization. Talk with your midwife about your GBS testing, results, and treatment to fully understand how to reduce the incidence of GBS colonization and infection.

### Informed Consent/Informed Declination for Prenatal GBS Screening

**CLIENT:**

I, \_\_\_\_\_ **ACCEPT/DECLINE** (circle one) to be tested for GBS at this time.

I understand that there is no "perfect" answer for GBS -- no perfect screening program, no perfect protocols which will identify and prevent all strep infected babies and that no method of screening and/or prophylactic treatment is 100% effective in preventing GBS. All that we can do is reduce the incidence.

I have had my questions answered and can make an informed decision regarding GBS testing.

\_\_\_\_\_ (client) \_\_\_\_\_ (date)

\_\_\_\_\_ (partner) \_\_\_\_\_ (date)

### HBMS Acknowledgment of ENTIRE Client Informed Choice Documentation

**MIDWIFE:**

I, \_\_\_\_\_, acknowledge this client's right to **ACCEPT** or **DECLINE** any and all testing explained in this document. I have given this client the opportunity to consider her options, ask and receive answers to her questions, and to make an **Informed Choice** regarding any/all prenatal testing.

\_\_\_\_\_ (midwife) \_\_\_\_\_ (date)