

Prenatal Handbook



BY STEPHEN R. WELLS, M.D.

As you begin this journey of creating life, I welcome the opportunity to care for you and share in this adventure. My goal is for you to have a wonderful experience, both in becoming a new mother (or a mother again) and also as a patient in my practice. I have put together a small handbook to help orient you to our office. I feel we run the most efficient kind of practice possible, given the extremely erratic nature of our business. I try to run on time at all times, but please realize that deliveries and emergencies may cause us to run late or may require rescheduling of appointments. You can be sure that I'm never sitting around in the doctor's lounge reading a newspaper or chitchatting. If I'm running late, it's usually because I'm trying to give another patient the time she needs. Yet it is my primary goal that my midwives, my nurse practitioner, my entire staff, and I provide you with the most positive pregnancy experience possible.

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On Being a Mother

We are sitting at lunch when my daughter casually mentions that she and her husband are thinking of “starting a family.”

“We’re taking a survey,” she says, half-jokingly. “Do you think I should have a baby?”

“It will change your life,” I say, carefully keeping my tone neutral.

“I know,” she says, “no more sleeping in on weekends, no more spontaneous vacations...”

But that is not what I meant at all. I look at my daughter, trying to decide what to tell her. I want her to know what she will never learn in childbirth classes. I want to tell her that the physical wounds of childbearing will heal, but that becoming a mother will leave her with an emotional wound so raw that she will forever be vulnerable.

I consider warning her that she will never again read a newspaper without asking, “What if it were MY child?” and that every plane crash, every house fire, will haunt her. That when she sees pictures of starving children, she will wonder if anything could be worse than watching your child die.

I look at her carefully manicured nails and stylish suit and think that no matter how sophisticated she is, becoming a mother will reduce her to the primitive level of a bear protecting her cub. That an urgent call of “Mom!” will cause her to drop a soufflé or her best crystal without a moment’s hesitation.

I feel I should warn her that no matter how many years she has invested in her career, she would be professionally derailed by motherhood. She might arrange for childcare, but one day she will be going into an important business meeting and she will think of her baby’s sweet smell. She will have to use every ounce of her discipline to keep from running home, just to make sure her baby is all right.

I want my daughter to know that everyday decisions will no longer be routine. That a five-year-old boy’s desire to go to the men’s room rather than the women’s at McDonalds will become a major dilemma. That right there, in the midst of clattering trays and screaming children, issues of independence and gender identity will be weighed against the prospect that a child molester may be lurking in that restroom.

However decisive she may be at the office, she will second-guess herself constantly as a mother. Looking at my attractive daughter, I want to assure her that eventually she will shed the pounds of pregnancy, but she will never feel the same about herself. That her life, now so important, will be of less value to her once she has a child. That she would give it up in a moment to save her offspring, but will also begin to hope for more years – not to accomplish her own dreams, but to watch her child accomplish theirs.

I want her to know that a cesarean scar or shiny stretch marks will become badges of honor. My daughter’s relationship with her husband will change, but not in the way she thinks. I wish she could understand how much more you can love a man who is careful to powder the baby or who never hesitates to play with his child. I think she should know that she would fall in love with him again for reasons she would now find very unromantic.

I wish my daughter could sense the bond she will feel with women throughout history who have tried to stop war, prejudice and drunk driving. I hope she will understand why I can think rationally about most issues, but become temporarily insane when I discuss the threat of nuclear war to my children’s future.

I want to describe to my daughter the exhilaration of seeing your child learn to ride a bike. I want to capture for her the belly laugh of a baby who is touching the soft fur of a dog or a cat for the first time. I want her to taste the joy that is so real it actually hurts...

My daughter’s quizzical look makes me realize that tears have formed in my eyes. “You’ll never regret it,” I finally say. Then I reach across the table, squeeze my daughter’s hand and offer a silent prayer for her, and for me, and for all of the mere mortal women who stumble their way into this most wonderful of callings. This blessed gift from God...that of being a Mother.

Author Unknown

First Things First...

About this handbook:

I would ask that you read over most of this booklet, which contains a majority of the answers to questions you may have during and after your pregnancy. Also, I would ask that you continue to refer to it when certain questions come up. It took me hours and hours to write. So when patients ask, “I was exposed to Fifth’s disease. What should I do?” I cringe, because I know that there is a whole page in here about what to do if you’re exposed to Fifth’s disease. On the other hand, when patients call and say, “I need to come in to get a blood test, because I was exposed to Fifth’s disease and I read in your handbook that I need to...,” I get very happy because I know all of my hard work has not been in vain. ☺

By your next Visit:

It is important that you take care of a few things as soon as possible.

1. **Schedule an appointment for your 1st official OB visit** (we call it a “New OB” visit). This visit should happen at around 12 weeks of pregnancy. We will review your medical and pregnancy history, perform a complete physical exam if needed, and review some basic pregnancy information.
2. **Have your blood drawn.** We will give you a lab slip for routine state-mandated lab tests. Please make sure to go to a lab *approved by your insurance*.
3. **Decide on which genetic screening tests, if any, you would like to do**—they are time-sensitive tests.
 - a. For the **Nuchal Translucency screening test, call Diablo Valley Perinatal Associates ASAP** for an appointment between 11 and 14 weeks (they book up appointments quickly—if you wait too long to call for an appointment, you will not be able to do this test). They are located downstairs from our office.
 - b. **You will also be offered the AFP test (to be done between 15 and 20 weeks).** For more details, see the section on genetic testing, *specifically the summary of options on page 51*.
4. **Decide on any available genetic testing mentioned on page 52–54.**
5. **Schedule your Level 2 Fetal Ultrasound appointment.** This is done during the second trimester of your pregnancy, between 16 and 20 weeks. This is also done in the office of Diablo Valley Perinatal Associates by physicians who are specially trained to use ultrasound to look for birth defects.
 - a. **If you will be less than 35 years of age by your due date**, you should call to schedule the appointment for around 20 weeks.
 - b. **If you will be ≥ 35 years of age by your due date** *and* want to have genetic counseling and possibly an amniocentesis, you should call to set up the appointment for around 16 weeks (*please refer to the genetic testing chapter on page 50*).
 - c. **If you will be 35 years of age by your due date and know that you do not want genetic counseling** or an amniocentesis unless the AFP comes back abnormal, please call to set up the appointment for around 20 weeks (*please refer to the genetic testing chapter on page 50*).

Okay, now that we’ve covered the time-sensitive stuff, on to the rest...

About Our Practice

In 2001, I transitioned away from a larger group practice with two office locations. It was very busy, at times chaotic, and as a result, somewhat impersonal. I wanted something different, so I went “solo”—something nearly unheard of. I began my solo physician practice with the help of Jennifer Boyce, a nurse practitioner I had previously worked with at John Muir’s Labor & Delivery. The practice grew and ultimately I hired another nurse practitioner, Jen Butler, who subsequently moved out of state. More recently, I hired Monica Gardner, who works in my office and also on Labor & Delivery at John Muir.

Since the time I began my own practice, I have been in a call group with 4 other physicians. Although I technically was on call every 5th night and every 5th weekend, I would nevertheless deliver about 96% of my own patients. That meant I would come in, even if not on call, to deliver my own patients whenever I possibly could. I have always wanted my patients to see a familiar and trusted face at the pinnacle moment of their child’s birth.

Fast-forward many, many years and roughly 6,000 deliveries later; my desire is still the same. However, I have more recently had a God-given Reality Check—if I keep up this pace, I will likely burn out professionally while still young(ish). I had thought about partnering with another physician, but that creates a completely different level of complexity in a practice, and I’ve been down that road before. Also, I very much still like being “solo,” while still being part of my call group.

Then I had an epiphany: Have a midwife join my practice, so that our patients can still have someone they know and trust deliver their child, while preserving my professional passion in a healthier way. When I met Sonya Jubb, CNM for the first time, we hit it off. She possesses such a calming and confident demeanor that I knew immediately she would fit perfectly into the essence of our practice. I hired her immediately and she has been a phenomenal addition to my practice. Our arrangement was so successful that I sought out and found another midwife, hiring Amanda Machette, CNM. She also has an endearing personality and skill to match. We have had rave reviews for both Sonya and Amanda since they have joined our practice.

So your next question may be “what’s the difference between a Nurse Practitioner and a Midwife?” Nurse Practitioners are highly qualified and well trained, and are actively involved with childbirth education and general patient education. They will often be able to spend more time answering questions than I will; and they will be able to continue seeing patients in the office when I am called out to attend deliveries or handle potentially life-threatening emergencies.

Midwives, on the other hand, can see patients in the office, but are also highly qualified and trained to manage labors and deliver women with low-complexity pregnancies. They have a more holistic approach to pregnancy and the labor process, but also utilize medications for labor augmentation when appropriate and pain relief when desired by the patient. They cannot, however, perform cesarean sections or forceps/vacuum-assisted deliveries. Interestingly and as expected, midwives have a very high success rate in achieving vaginal deliveries without requiring these procedures.

I would love for you to alternate visits throughout your pregnancy. We all have unique perspectives to offer that are invaluable. When that special day comes, my desire is, as always, for you to see a familiar face when you deliver. For more information regarding how our on-call schedule works, please refer to my section regarding Labor & Delivery.

Who's Who in the Office

Each person in the office is responsible for certain aspects of your prenatal care. The following is a list of those who are here to help you:

Ambur, Julie, Jess, and Marivic are our friendly receptionists and are often able to accomplish the impossible with regard to scheduling appointments. They will be happy to make appointments, answer any medical questions you may have *that are already answered for you in this booklet*, or direct you to anyone else in the office. Reach them by dialing our main office phone number 925-935-5356. When you call and speak with Ambur, Julie, Jess, or Marivic about questions that will require us to call you back, give them every number possible so that we can answer back quickly and easily. At any time during your pregnancy, *they can schedule several appointments in advance for you* (absolutely the best way of decreasing any hassles regarding obtaining appointments that work with YOUR schedule).

Jess is also in charge of disability forms. During your pregnancy, you may need us to fill these forms out. When you bring them in, give them to Jess, who will fill them out, place a copy in your electronic chart, and send the original in to the appropriate disability department. Or, check out our website for instructions and links to do the entire process online (the easy way...).

Jody is our Office Manager and billing coordinator. She is able to answer questions related to billing and insurance authorizations. Please call her with billing or administrative questions or suggestions that would help our office run more smoothly (*constructive* criticism is always welcome...) or email her at jody@stephenwellsmd.com

Jessica works one day per week helping Jody with administrative tasks. They work seamlessly together and can handle billing or administrative questions interchangeably. She can be reached at Jessica@stephenwellsmd.com

Maria and Heather are the medical assistant who works with our midwives Sonya and Amanda, nurse practitioners Jennifer and Monica and Dr Wells (Maria works mostly with Dr. Wells) Please contact Heather first for questions to be directed to the midwives or nurse practitioners. She is fully prepared to provide basic information regarding certain laboratory test results or needed tests during your pregnancy. If you think that you need to be squeezed in for a visit at any time, ask to speak to Heather, and she'll pave the way... Similarly, Maria is very capable of giving basic information for lab results and basic questions regarding your prenatal care. And for any other complex questions to be directed to, and that require Dr Wells instead of our other providers, please call and ask for Maria.

Jennifer Boyce and Monica Gardner are our licensed nurse practitioners. As mentioned before, they assist in providing prenatal care. Because their schedules are purposefully less busy, they are usually able to respond to phone-call questions intermittently throughout the day. Dr. Wells usually answers phoned-in questions during the lunch hour (he rarely has time to actually *eat* lunch because he is usually at the hospital in surgery or on Labor & Delivery) or after seeing patients scheduled in the afternoon. **For most any question about pregnancy (routine/unusual symptoms, concerns, problems, laboratory interpretation, etc.), or if you have any special needs, please call and ask for Jennifer or Monica.**

Sonya Jubb and Amanda Machette are our Certified Nurse Midwives. See the next page for more information about Sonya and Amanda!

Midwifery Services

I am very proud to offer my patients a new opportunity! For the first time ever, John Muir Medical Center is now allowing well-trained and certified nurse midwives the opportunity to deliver low-risk patients on their Labor & Delivery unit. Although commonplace at other hospitals in the Bay Area, this unprecedented move finally places John Muir on the cutting edge in providing a comprehensive spectrum of birthing options for women.

In response to survey results from my patients, where over two thirds expressed interest in a midwife option, I began the arduous task of presenting data to John Muir's Obstetrical Department, Interdisciplinary Committee, Medical Executive Committee, and finally the Board of Directors. Their response has been overwhelmingly supportive, and approval on all levels was swift. This nine-month journey was finally completed with the addition of Sonya Jubb, CNM to my team! Sonya has been working in my office for the last few years, delivering hundreds of babies! Because of such positive feedback, I have more recently brought on Amanda Machette, CNM to provide yet more birthing options.

The questions many patients will be asking depend on their desires for childbirth. First, why bring on a midwife, and not another doctor? My response is simple: to offer my patients another alternative. I appreciate that patients like my style of practice and trust my judgment and skill. I am also sensitive that some patients may prefer a more low-intervention experience, and am humble enough to recognize that midwives like Sonya and Amanda have been specially trained to provide such an experience. Midwives also historically provide care to women in childbirth that is associated with lower incidences of cesarean sections and vacuum or forceps use.

Another question patients may ask is related to an age-old stereotype. The simple answer is no, midwives don't just do homebirths. In fact, in the U.S. only 2% of midwives do them. Another 2% deliver in freestanding birthing centers. The remaining 96% of midwives deliver women in the hospital, under the supervision of Obstetricians, and within well-defined policies and procedures. **NO, WE DO NOT OFFER HOME BIRTHS.** Although we recognize that some couples may choose this option, this is not something we feel comfortable with. At all.

In regard to the personal benefits of having Sonya or Amanda attending birth, think of them as the perfect combination of doula and obstetrician: a labor-support person who can also deliver. If a woman's labor changes to a more complex situation requiring an obstetrician for operative delivery, she will continue to be able to provide support before, during and after delivery.

So as you consider what type of delivery would be best for you, let me explain how care is offered in my office. First, it is important to understand that Sonya and Amanda only attend low-risk births, and although they will be available many days to attend delivery, they may not be available every day. We will likely share in delivering women, and I will still be in my same call group, sharing call with my obstetrician partners. If I am on call, I will be the face you see for delivery. If I am not on call or am on vacation, then it may be me or Sonya or Amanda, depending on the day. If I am away or on vacation, and you prefer to be delivered by an MD, you can choose instead to be delivered by one of my obstetrician call partners. But my goal is, as it always has been, to have nearly all of my patients be delivered by a "familiar face." In 2015, I still delivered about 254 babies, while Sonya about 105, and Amanda, who just started, about 14. My physician call partners delivered about 8 of our patients, way fewer since Sonya and Amanda joined.

I am thrilled to have Sonya and Amanda on my team and hope you will enjoy all that they will be able to offer to make your birthing experience everything you hope it to be.

I Can't Believe I'm Pregnant

Something truly miraculous has begun within your body, and as this process begins there are several important pieces of information you need to know to get you through the first several weeks. Here is a list of the **most common pregnancy-related symptoms** you may be experiencing and their significance:

1. **Bleeding:** This is perhaps the most important problem to address in the first few weeks of pregnancy. Between twenty to twenty-five percent of all women who are pregnant will spot or bleed to some degree in the first several weeks of pregnancy. If an ultrasound examination confirms a living embryo, the risk of miscarriage is about 3–5%. If we are unable to confirm the presence of a beating heart, half of these women will lose the pregnancy, and half will go on to carry their baby to term. If heavy bleeding occurs, call us day or night. Provided bleeding is not extremely heavy we will ask you to come in for an ultrasound evaluation and obtain blood hormone levels. **If bleeding is very heavy we may ask you to go to the emergency room. If in the middle of the night there is spotting only, and you are not experiencing pain, you may wait until morning to call us.** If bleeding is recent, and your blood type warrants, we will administer an injection of Rhogam, a medicine that prevents a build-up of maternal antibodies that may harm the present or future pregnancy.
2. **Pain:** Some cramping during early pregnancy is quite normal. We call this cramping “growing pains.” Cramping in the absence of bleeding does not represent an impending miscarriage. **Severe** cramping and pain, however, is outside of what should be expected, and we want you to **contact us if you think it is becoming unbearable.**
3. **Fatigue:** Extreme fatigue is one of the most common symptoms you may experience. Our advice: **Don't fight it. Nap if you can.** If you have small children, then you know that when they nap you can get things done. But, we recommend that you get some sleep instead. **This fatigue will last until about 14 to 16 weeks.**
4. **Nausea and vomiting:** Also very common and frustrating. **These symptoms usually go away by 14 to 16 weeks, but sometimes can persist for longer.** We can give you excellent medications to help if you absolutely need them, but sometimes using little tricks can suffice, i.e., **eating dry bread or crackers, sipping ginger ale or other clear sodas, sipping the juice from canned peaches or pears, and avoiding foods that make the sensation of nausea worse.** *Motion sickness wristbands help occasionally.* In severe cases of nausea and vomiting, we need to admit patients into the hospital and re-hydrate them with intravenous fluid (which makes you feel OOOHHH so much better!!!). Warning signs of significant dehydration are severe headache, dizziness with standing, urinating infrequently with dark colored urine, a racing heartbeat, vomiting blood, and an inability to keep any liquids down. If you suffer from these symptoms, please call us. We'll ask you to come in and we'll check your urine to see how concentrated it is. **If your symptoms warrant, we'll send you to the hospital to get “tuned up.”**
5. **Constipation:** Early in pregnancy, progesterone is produced in high amounts and serves to support a pregnancy and to prevent bleeding. But progesterone is also considered a “*smooth muscle relaxer.*” Since intestines are made up of “smooth muscle,” they relax, slow down and fill up with air, causing bloating and constipation. **To combat constipation, drink plenty of fluids. Include juices, such as prune juice. Eat foods high in fiber, such as raw fruits, vegetables, and bran cereals. You may also take stool softeners such as Colace (available at pharmacy stores without a prescription) several times daily. Milk of Magnesia works well too!**
6. **Breast tenderness:** This is almost inevitable, so be prepared. **Wear gradually larger bras that are comfortable,** but well supportive.
7. **Headaches:** These may be very uncomfortable, and **migraine sufferers are most likely to experience an increase in frequency and intensity.** If you can, get by with extra-strength Tylenol. If you think you need more, please call us. There are excellent medications, especially for migraines, that are safe in pregnancy.

The next section will explain the purpose and flow of prenatal visits.

A Schedule of Visits

Visits in our office are set up in a way that is comparable to other physician offices. We do deviate in some areas, which we feel allow us to provide better care. The following outline of prenatal visits refers to uncomplicated, low-risk patients. Special circumstances in your pregnancy may cause a change in this schedule.

1. **10–12 week First official Obstetrical (New OB) visit.** This appointment will typically be scheduled with Sonya Jubb, or Amanda Machette. We will obtain a thorough history and perform a complete physical examination, unless an exam has recently been done in our office. Labs drawn previously (hopefully...) will be reviewed. Goals for weight gain, nutrition, and exercise may be reviewed during this appointment.
2. **Monthly interval examinations** will continue until about 30 weeks. If you have had symptoms of bleeding or cramping, or if you have other concerns, please discuss them with us during these visits. At your 14–16 week appointment, genetic screening tests will be discussed. At 28 weeks, a gestational diabetes screening blood test will be drawn, and we will check for anemia. If you have an Rh-negative blood type, we will give you an injection of Rhogam (a medicine to help protect your baby from maternal antibodies) 1 to 3 days after this visit. Please alternate visits with each potential delivering provider so you can get used to us! You will learn something different from each encounter. Also, feel comfortable seeing the nurse practitioners as well, if we make appointments for you with them.
3. **Biweekly (every 2 weeks) examinations** will continue from 30 to 36 weeks. These are easy visits. Questions will be answered, and we will check fetal growth and listen to the baby's heart rate. This is a good period of time to interview pediatricians. Bring in your insurance book if you need a referral from a limited number of physicians. Make sure you have registered at the hospital by this time (it should have been done by 15 weeks or so...). You may have started and nearly completed childbirth classes by now.
4. **Weekly visits** will continue from 36 weeks until delivery. In addition to checking growth and fetal heartbeat, we will be checking for changes in the cervix at each visit, beginning at 36 weeks. At each visit until the end, it is important to check the position of your baby. Make sure you have a pediatrician picked out by this time...
5. **A postpartum visit** will be scheduled for 6 weeks following your delivery. If you have had a cesarean section, we will have you come in for an incision check at 2 weeks. We will discuss contraception, resumption of sexual activity, exercise, and proper diet, and will set up an appointment for your next annual exam. **Please read up on Postpartum Contraception (at the end of this booklet).**

Purpose of Prenatal Visits

Frequent visits to our office serve multiple functions: monitoring you and the baby, and educating you about the changes taking place in your body. Obviously, most pregnancies are uncomplicated and end in the delivery of a healthy infant to a healthy mom. Although rare, unexpected problems can arise in women with the fewest risk factors. We believe that frequent monitoring of you and your baby can identify problems earlier so that treatments are instituted promptly. The result of this type of care is a greater chance for a healthy outcome.

In addition, questions can be answered regarding the health of your baby, normal and abnormal symptoms experienced during pregnancy, weight gain, exercise and activity restrictions, sexuality, and plans for labor and delivery. We also need a chance to dispel all of the myths and folklore taught by the lay person (“social professionals”): sex determined by fetal heart rate or the way you are carrying; head full of hair if you have lots of indigestion; “I can tell your baby has dropped or is too big or is too small,” cord entanglement because of raising your arms above your head, etc.

What to Expect in Our Office

Your prenatal-care appointments will take approximately 30–45 minutes, 10–15 minutes of which will be face to face with one of my nurse midwives, Sonya Jubb or Amanda Machette, with my nurse practitioners, Jennifer or Monica, or with me. On the way back to the exam room, one of our medical assistants, Maria or Heather, will ask you to weigh yourself and to provide a sample of urine. The urine will be tested for the presence of *glucose* (indicator for diabetes) and *protein* (indicator for urinary tract infections that may be present with no symptoms). Protein may also provide evidence of developing toxemia *if* present in combination with elevated blood pressure. Once in the room, your blood pressure will be taken. If you are 36 weeks or later in your pregnancy or if you are experiencing abnormal uterine activity, you will be asked to undress from the waist down for a cervical examination.

The nurse midwife, nurse practitioner or I will then come in to ask questions and to examine you. Before twenty weeks, the exam consists mostly of listening to the baby’s heartbeat. After twenty weeks, we’ll ask more detailed questions about you and your baby and we’ll measure your uterus to assess proper fetal growth. **It is very important to tell us if you’ve experienced a decrease in your baby’s movement patterns, if you’ve had vaginal bleeding or leaking of water from the vagina, or if you’ve had contractions.** We’ll also check for adequate weight gain and answer questions you may have regarding any aspect of your pregnancy.

Like every other OB/GYN office in our area, we do not provide routine ultrasounds during each prenatal visit, but refer patients for ultrasounds when appropriate to physicians specially trained and licensed to do so. Please understand our position on this. We used to do them more frequently, but the medico-legal environment we now live in has squelched fun things like that...

Prenatal Checklist

Keep referring to this page as you go through your prenatal care in our office. It will help remind you when to get certain special tests and to schedule classes. Keep in mind that not all tests will coincide with your office visits, and some tests are time sensitive (there is a “window of opportunity”). After you’ve completed each task, CHECK IT OFF!

First Trimester

- _____ 1) **Blood draw** for routine prenatal laboratory tests. This should have been done prior to your first “obstetrical” visit. **Additional testing for Cystic Fibrosis, Ashkenazi Jewish Panel, or Sickle Cell are offered. IF YOU WOULD LIKE THESE TO BE DONE, YOU MUST LET US KNOW!** (Read pages 52–54 for details. Insurance may or may not cover this extra testing.)
- _____ 2) Call the perinatologist office if you are interested in having the **First Trimester Prenatal Screening test (Nuchal Translucency, or NT) or genetic counseling/amniocentesis** (refer to the genetic testing section on page 47 in this handbook for details). **The NT test may only be done between 11–14 weeks. Schedule far in advance!**
- _____ 3) Call the perinatologists at Diablo Valley Perinatal Associates ([925-891-9033](tel:925-891-9033)) to set up an appointment for a **Level II 20 week ultrasound** (Believe it or not, they are extremely busy and it is best to call *way* in advance). Make sure that Diablo Valley Perinatal Associates accepts your insurance and ask them whether the ultrasound needs to be pre-authorized. Everyone receives a 20-week ultrasound.

Second Trimester

- _____ 4) Maternal **AFP**, if desired, to be done between 15–20 weeks, (ideally between 17–18 weeks).
- _____ 5) Obstetrical **Level II Anatomic Ultrasound** at 20–21 wks.
- _____ 6) Fill out/send in Hospital **Registration forms** at 15 weeks, **or do so on-line @ www.jmmdhs.com/maternity/**
- _____ 7) Call between the first trimester ultrasound appointment and the first official obstetrical appointment to sign up for **classes at the Women’s Health Center in Walnut Creek**. I usually recommend the childbirth education (Lamaze) classes, infant CPR, and the Breastfeeding & Care of the Newborn class. They are supported by John Muir Medical Center Birth Center and they are AWESOME!!!

Third Trimester

- _____ 8) **Blood draw at 28 weeks** (give or take one week).
 - One-hour post-glucola (screening test for diabetes) and a repeat Heme 4 (to check for anemia)
 - Antibody screen for moms who have Rh-negative blood
- _____ 9) **Rhogam injection at 28 weeks** ONLY for moms who have Rh-negative blood. This will be given 1–3 days after your antibody screen was drawn.
- _____ 10) **Tdap Vaccine** should be received sometime from 27–36 weeks, if not given previously in this pregnancy. For more information on this see the Common Questions section!
- _____ 11) **Vaginal culture** to identify carriers of Group B streptococcus (GBS). This culture will be done at 36 weeks. Be sure to ask for results at the very next appointment. Be sure to read the section on GBS.
- _____ 12) Call and interview with a **pediatrician** if you do not already have one. It is important that you have one picked out by the time you enter the hospital.

Postpartum

- _____ 13) Schedule an appointment for 6 weeks following your delivery (2 weeks if you’ve had a cesarean section). At this visit we’ll perform a **pelvic exam and discuss contraception...**
- _____ 14) If you had **gestational diabetes**, you will need a follow-up two-hour post-glucola test.
- _____ 15) If you had an **abnormal PAP smear** during your pregnancy, you will need follow-up at this visit or soon after.
- _____ 16) If you have thyroid disease, we will need to test your blood again.

Common Questions

CAN I COLOR MY HAIR?

Although it is safest to avoid exposure to unnecessary medications or chemicals during the first 12 weeks of pregnancy, **no data has shown any birth defects or fetal problems associated with the use of hair dyes or peroxide before 12 weeks.** Additionally, chemicals of all types are very poorly absorbed through the skin, so we would say yes, you can color your hair any time during pregnancy. Be aware, however, that because of the change in hormones during pregnancy, your hair color may not come out as expected.

ARE TANNING LOTIONS SAFE?

Tanning lotions are basically dyes that color the skin. Since the skin is such a great barrier in its function as the primary defense mechanism for our bodies, chemicals almost have to be specifically designed to penetrate skin layers to be absorbed. So yes, tanning lotions or sprays are safe, and are certainly safer than the radiation effects of tanning beds.

WHAT ABOUT TEETH-WHITENING PRODUCTS?

Unfortunately, we do not have any evidence that these products are safe or not safe. My guess would be that they're harmless, but since there are no medical studies to say either way, I'd advise not using these products until after you are done with the pregnancy and breastfeeding.

CAN I STILL USE ARTIFICIAL SWEETENERS?

Yes, you can use aspartame (in Equal brand sweeteners). The FDA has stated, as has the World Health Organization, that Sucralose, found in **Splenda, is completely safe in pregnancy.** In 2005, the American College of Obstetrics & Gynecology **okayed the moderate use of saccharine** found in Sweet and Low brand sweeteners. And by the way, sugar-free gum is fine to chew during pregnancy.

DO I NEED TO STOP ALL CAFFEINE INTAKE?

When caffeine is used in moderation, there has been no association with birth defects, miscarriages, preterm delivery, or low birth weight. However, with consumption of high doses, there has been an association with miscarriages and infertility. **The bottom line is that caffeine intake during pregnancy is fine in moderation,** so we would recommend limiting your intake of any caffeinated beverages to **three or less per day.** Remember that caffeine is found not only in coffee, but also to a lesser degree in teas and sodas. (If you are a coffee addict, you might try putting half decaf and half regular in your cup.) Decaffeinated drinks are better for your health in general anyway, so now is a good time to lower your intake of caffeine.

CAN I STILL DRINK ALCOHOL WHEN I AM PREGNANT?

Because it is currently **unclear how much alcohol in pregnancy is harmful,** the best advice is to not drink at all. **Having a half glass of wine on a special occasion is most likely harmless.** However, women who abuse alcohol in pregnancy increase their odds of having a miscarriage, a premature baby, or delivering a baby with fetal alcohol syndrome. This syndrome can lead to growth problems, heart defects, facial defects, and behavioral problems. The women with the highest risk for delivering a baby with Fetal Alcohol Syndrome are those who drink two alcoholic beverages a day for the entire pregnancy and those who binge drink.

CAN I USE RECREATIONAL DRUGS DURING PREGNANCY?

NO. Enough said. Just don't do it. Come on, seriously...you're about to be a parent ☺.

DOES SMOKING REALLY HURT THE BABY?

Absolutely. Every puff taken by a pregnant mom gets to the baby and can put the pregnancy at risk for miscarriage, bleeding, stillbirth, pre-term delivery, deformed lungs, and mental defects. In addition to the very serious problems that can result with smoking during your pregnancy, if you or your partner smokes after the baby is born, you are raising your child's odds of developing asthma and sudden infant death syndrome (SIDS). The sooner you quit, the better. **Let us know if you need help, as heavy smokers can benefit from using nicotine patches or gum during pregnancy.**

CAN I EAT FISH DURING PREGNANCY?

Recently the FDA published an advisory on methylmercury in fish, and established guidelines to help women understand the hazards of consuming certain kinds of fish. This advice also applies to breastfeeding moms and small children.

Fish such as **shark, swordfish, king mackerel, and tilefish** contain high levels of a form of mercury called methylmercury that may harm your baby's developing nervous system. These fish live for long periods of time, and feed on smaller fish, thereby accumulating larger quantities of methylmercury.

Since we know that fish and other forms of seafood can be healthy during pregnancy, *the FDA's advice only applies to the aforementioned fish.* **Shellfish, canned fish, smaller ocean fish, or farm-raised fish can be safely eaten during pregnancy.** The FDA has stated that **women should limit the intake of these "safe" fish to an average of 12 ounces per week.** A typical serving of fish is approximately 3 to 6 ounces.

There is no harm in eating more than 12 ounces of fish in one week as long as you don't do it on a regular basis. One week's consumption does not change the level of methylmercury in the body much at all. **If you eat a lot of fish in one week, you can cut back the next week or two and be just fine.** Just make sure you *average* 12 ounces or less of fish per week.

WHAT ABOUT SOFT CHEESES?

The concern here is related to the bacteria called Listeria, **which is commonly found in unpasteurized soft cheeses.** Listeriosis can be transmitted through the placenta and to the fetus, without the mother realizing she has been infected with the bacteria. It is best to simply avoid soft cheeses and thus avoid the risk of developing listeriosis.

Soft cheeses to be avoided include *unpasteurized* feta, Brie, Camembert, blue-veined cheeses, and Mexican-style cheeses such as "queso blanco fresco." The key word here is "unpasteurized."

Safe cheeses are hard cheeses, semi-soft cheeses such as mozzarella, pasteurized processed cheese slices and spreads, cream cheese, and cottage cheese or any other cheese that is pasteurized.

MY FRIENDS TELL ME I CAN'T EAT DELI MEAT. WHAT'S UP WITH THAT?

The concern here is also related to contamination of deli meat with the bacteria *Listeria*. This is a challenging topic, because it is always easier to say “Don’t” than “Yes, it’s okay.” This is like asking me “Is it safe to drive on the freeway while pregnant?” My answer would be “Yes, as long as nothing bad happens...” So you have a choice to drive on the freeway or not. You can certainly reach most of your destinations using side streets, but it’s just less convenient.

First, how common are *Listeria* infections? According to the CDC, there are about 1600 illnesses and 260 deaths annually in the United States. From 2009–2011, that translated into 0.29 documented cases of *Listeria* per 100,000 people. More than one half of all infections occurred in those older than 65, and about 14% of cases of *Listeria* occurred in pregnant women, occasionally causing miscarriage, preterm labor, and rarely stillbirth. So it can be devastating, but again, so can driving on the freeway.

I’m not sure the recommendations by the CDC hold water. They recommend heating deli meats until “they are steaming” immediately prior to consumption. But these meats are already pre-cooked or cured. So *Listeria* must come to deli meats from another source, like someone’s refrigerator or transport containers, etc. One *Listeria* outbreak in 2011 came from cantaloupes from a farm in Colorado. Do we then heat up cantaloupes and therefore all fruits and vegetables?

So I would say, yes you can drive on the freeway. And yes you can eat deli meat. You can heat it up if you choose, or not. Regardless, this infection is incredibly rare and can be deadly whether it comes from deli meat, cheese, fruits, or vegetables.

Hot dogs, on the other hand, must be heated up because they are just plain gross cold, but are great on the grill as long as you don’t think too much about what’s in them...

HOW MUCH WEIGHT SHOULD I GAIN?

How much weight you should gain during the pregnancy depends on how much you weighed before you became pregnant. The average recommended weight gain is 25 to 35 pounds. However, underweight women should gain a bit more, and obese women should gain less.

<u>Condition before pregnancy</u>	<u>Weight gain advised in pounds</u>
Underweight	28 to 40
Normal weight	25 to 35
Overweight	15 to 25
Obese	15
Carrying twins	35 to 45

Also keep in mind that during pregnancy we need only an **additional 300 calories per day** compared to a non-pregnant caloric intake. That adds up pretty fast, so keep an eye on your diet. (A non-pregnant woman needs between 1800 and 2200 calories a day.)

Women who do not gain enough weight put their babies at risk for being small (less than 5½ pounds). This can produce associated health problems for the baby. **Women who gain too much weight have an absolutely profound increased risk of developing high blood pressure, diabetes, and delivering a very large baby.**

HOW MUCH WEIGHT IS MY BABY GAINING DURING THE PREGNANCY?

Your baby grows at different rates, depending on how far along you are in your pregnancy. We call these differing growth rates “**cell growth phases.**” Roughly speaking, your baby gains 5 grams per day at 15 weeks, 15-20 grams per day (slightly more than 1/4 pound per week) at 24 - 33 weeks, and 30-35 grams per day (**1/2 pound per week**) **at and after 34 weeks.** These rates are not absolutes for every baby, though...

WHAT SHOULD WE DO ABOUT OUR CATS?

Cats that are “hunters” may carry a parasite called *Toxoplasma gondii*. Strictly indoor cats are less likely to carry this disease-causing organism. The best advice is to **let someone else clean the cat litter, where the highest concentration of Toxoplasmosis is likely to reside.** If you must do it yourself for some reason, **wear gloves and wash your hands immediately** after changing the litter. Also, wash your hands after handling your cat. Toxoplasmosis is very rare and I've never actually seen a case of a woman's pregnancy being complicated by the disease. Chances are likely I never will. That's how rare it is.

CAN I LIE ON MY BACK DURING MY PREGNANCY?

Yes you can. Unfortunately, what used to be “lying on your left side is best” has now become “therefore when you lie on your back, it's bad.” However, this latter statement, which was perpetuated by those with no medical background and medical personnel alike, has misled countless pregnant women. We recommend lying on the left side in only very few situations.

Along the right side of your spine runs the largest vein in the body, called the vena cava. Since the uterus in pregnancy is rotated slightly to the right side of your body (because the lower part of your colon runs along the left side of your pelvis thereby pushing the uterus forward and to the right), it can compress the vena cava. This compression of the vena cava may inhibit the blood flow returning to your heart. If there is less blood flow returning to your heart, then there is less blood pumping out of your heart back down to the uterus and other organs. When lying on your left side the uterus is shifted off of the vena cava, thus increasing blood flow returning to the heart.

That being said, **how important is this reduction of blood flow returning to the heart to the health of the baby?? The answer is “it depends.”** In rare circumstances, the change in blood flow can have a substantial impact on the pregnancy. In women with **hypertension**, bedrest with lying on the left side decreases blood pressure and can prolong pregnancy to term. In women with pregnancies complicated by **intrauterine fetal growth restriction**, lying on the left side may help bring more nutrients and oxygen to the deficient fetus.

Additionally, women with **twins**, because of an extremely large uterus, are recommended to stay on the left side as much as possible. Other than these circumstances, women can safely lie on their backs as long as it is comfortable for them. If there is reduced blood flow to the heart and therefore from the heart, keep in mind that there is also decreased blood flow and oxygenation to the brain. **Your brain is VERY sensitive to this change and will prompt you to change your position** (nausea and light-headedness are often “prompts” from the brain). **If you are asleep, know that your brain is very much awake and will protect you and baby by rolling you over onto your side or into a position that will increase blood flow and oxygenation.**

So don't worry about the lying-on-your-back thing. **If you have a normal healthy pregnancy, lying on your back will not jeopardize your baby.**

IS IT SAFE TO HAVE SEX DURING PREGNANCY?

Unless we advise you not to, it is safe to have sex throughout the pregnancy until labor. Examples of complications of pregnancy in which we may advise you to abstain would be pre-term labor, placenta previa (a condition where the placenta covers all or part of the cervix), bleeding of unknown origin, or ruptured membranes. Keep in mind that you may have to be a bit creative with positioning as you get farther along in your pregnancy...

WILL A HOT TUB HURT MY BABY?

I have extensively reviewed available medical literature regarding use of hot tubs during pregnancy. **What I discovered is rather encouraging as long as certain guidelines are adhered to.**

Whether or not hyperthermia (fever, or increased body temperature from immersion in hot tubs or sauna use) is teratogenic (able to cause fetal abnormalities) remains slightly obscure. It has been suggested in some studies that hyperthermia early in the first trimester (specifically the first 6 weeks of pregnancy) may be responsible for so-called neural tube defects such as spina bifida and anencephaly. In addition, significant hyperthermia very early in pregnancy has been associated with spontaneous miscarriage. **Later in pregnancy, there does not appear to be much risk to the baby.**

While the exact temperature elevation that is responsible for fetal damage is not precisely defined, it appears that there must be a **critical temperature at a critical developmental stage** for there to be damage. This is usually during the time from attachment of the developing embryo to the uterus, until the completion of organogenesis (formation of all internal organ systems).

It is generally believed that the body temperature must reach at least 102°F in order to increase the risk of neural tube defects. It is uncertain whether or not a hot tub in typical use would raise the core body temperature to this level. In one medical study, 20 non-pregnant women sat in hot tubs heated to 102°F and 105.8°F. Only six were able to continue immersed until their core body temperature reached 102°F. **None of the women reached a core body temperature of 102°F when they spent 15 minutes in the 102°F tub and 10 minutes in the 105.8°F tub.**

From the information in all of these in-depth studies, our recommendations are to **enjoy the relaxation provided by hot tubs, keeping the following pointers in mind:**

- a. Avoid Jacuzzi hot tubs *during the first 12 weeks* of pregnancy.
- b. Avoid *prolonged exposure* in the hot tub. **Get in for short periods of time (10-15 minutes), then get out for brief periods to let your body cool down.** This will prevent your core body temperature from increasing to a dangerous level. If you prefer to keep the water hotter, stay in for shorter periods of time.
- c. Avoid the Jacuzzi if you have *high blood pressure or if we've told you that your baby is not growing properly.* (During periods of hyperthermia blood is shunted from the uterus, intestines, liver, and other organs to blood vessels just underneath the skin in an effort to release the body's heat. In a pregnancy that is jeopardized already, we want to minimize the diversion of blood flow from the uterus.)

SHOULD MY HUSBAND AND I COME UP WITH A BIRTH PLAN?

You may come up with a birth plan if you wish, although it is not necessary. **More often than not, what you come up with is what we usually do as a routine.** Regarding pain management, you can have whatever you want **or go without.** When your baby is born, **assuming all is well,** we put your little one on your stomach immediately. We'll clamp the umbilical cord and **your husband may cut the cord if he desires. I don't do routine episiotomies,** but if I recommend it, please listen to my advice. I am looking out for the long-term benefit of your perineum...

MY FRIENDS TELL ME WE SHOULD HIRE A DOULA. WHAT DO YOU THINK?

Interesting topic: Here is the "bullet", but **please refer to my section called Labor & Delivery for more information about what happens at this stage.** Wikipedia defines a doula as an assistant who provides non-medical and non-midwifery physical and emotional support during labor and childbirth. I have worked with a number of doulas over the years. In my experience at John Muir, **the Labor & Delivery nurses who care for laboring women are excellent in providing support, and they encourage husbands/partners to be involved in providing support as well.** I have found that IN GENERAL, husbands/partners can be very attentive and helpful, if given the opportunity. **Between your L&D nurse and your partner, I am confident you will do very well and have a great birth experience. A close, *calming* friend can be very helpful as well, and they usually don't charge for their services ☺.** If you think you need to have a doula, talk to me first...

I WANT TO DO THE BRADLEY METHOD OF CHILDBIRTH. WHAT DO YOU THINK?

Although less common, **I have helped many women in my practice deliver their infants in an un-medicated fashion.** I always leave the decision to receive pain medication, either by epidural or narcotics, to my patients. However, **the Bradley method of natural childbirth is not the same as "un-medicated birth."** *In my experience,* the Bradley method tends to allow couples to take their eye off the ultimate prize – safe childbirth, and focus instead on an entirely, previously planned process of labor and delivery. I liken the Bradley method to riding a bike without a helmet, or driving a car without a seatbelt. Most of the time you can ride or drive to your destination without a hitch, but **sometimes seatbelts (i.e., so-called "unnecessary interventions") and helmets (i.e., fetal monitoring during labor) can save lives.**

It seems that I spend a great deal of time trying to explain to my Bradley patients that they can benefit from my experience of delivering over six thousand babies, and I know all the "tricks of the trade" to get babies out safely and usually vaginally. **Sometimes "nature" isn't all that kind and doesn't listen to what we want to have happen, like back in the 1800s.** Although I respect couples' wishes to undergo un-medicated, un-monitored, no-intervention-at-all-cost births, **I would rather have a relationship with my patients that includes trust in my expertise so we can walk through labor as a real team.**

I have always felt that my "Bradley patients" harbor a certain degree of distrust in my recommendations, and those of the Labor & Delivery nursing staff. **So, if you wish to go through labor and delivery using the Bradley method, please let me know. I will be happy to refer you to another colleague...Seriously!** (And no, I'm not a hater...). I would ask that you read my section on "Labor & Delivery" to better understand my birthing philosophy. I desire a happy and healthy outcome to your pregnancy with a wonderful birth experience!

WE WOULD LIKE TO TAKE PICTURES AND VIDEOTAPE THE BIRTH. IS THAT OKAY?

I would love to have you record the big event! So make sure you have fresh batteries and enough memory on your card. **Take all the pictures and video you want!** A few things I should mention: First, the hospital allows pictures and video as long as everything is going okay. If problems suddenly arise during your labor or delivery, the nursing staff will ask you to shut down camera and video use and stay out of the way so we can take care of business quickly. (Hospital policy...no negotiations ☺).

Lastly, pick the person you want to take pictures or videotape very carefully. For example, there's Grandma, thrilled to be a part of the birth and given the task ("Sure I'll do it," she said excitedly) of videotaping the "once in a lifetime event..." On the camcorder screen, there is her daughter and her husband, with delivery close at hand. A perfectly framed couple on the video screen in the most exciting moment of their lives...The baby's head starts to come out, and suddenly on the video screen is the floor alternating with grandma's shoes, a discarded pillow, and a gum wrapper on the ground. The camcorder is held in grandma's left hand as her right hand loosely covers her mouth. She can't see clearly as tears fill her eyes as she witnesses the miracle. And in the background of the video is grandma's shaky voice saying, "Oh my Lord, oh my...Sweetie, she's beautiful...Oh my Lord. Look at her"...(and there on the video screen is the floor and grandma's shoes again)... "Oh, how wonderful...Beautiful!!!" **Are you getting "the picture" yet???** (Love you Grandma!!)

I WAS TOLD I WAS ANEMIC. WHAT IRON SUPPLEMENT IS BEST FOR ME?

If you were told either at the beginning of your pregnancy or at 28 weeks that you are anemic, don't worry. **Anemia in pregnancy is common, and the cause is more likely physiologic,** and not "pathologic." When we draw your blood into a tube, it is centrifuged in a lab and the **hemoglobin** and **hematocrit** are determined. **These are the markers we use to assess whether or not you are anemic.** The hematocrit is basically a percentage of blood cells to whole blood. Blood is made up of two components, blood cells and a straw-colored fluid called serum. When blood is centrifuged, the two components separate. If the blood cell portion represents half of the total volume of blood, the hematocrit would be 50%. If the blood cell portion represents 1/3 of the total volume, the hematocrit would be 33%. The normal hematocrit range for non-pregnant women is 37-47%. **Pregnant women progressively produce more serum than when not pregnant, making the percentage of blood cells to total volume of blood falsely lowered.** So we won't make too much of the anemia. **We do, however, recommend that you take iron supplements if your hemoglobin or hematocrit falls below a certain threshold.** The brand we recommend most is the over-the-counter supplement called **Slow-Fe or Bifera.** This is usually well tolerated and rarely causes stomach upset or constipation. **If you are intolerant to the over-the-counter supplements, a prescription-strength supplement called Chromagen Forte would work well.** Let us know if you need a prescription for Chromagen Forte.

I HAVE HERPES. HOW CAN I PREVENT OUTBREAKS AND AVOID A CESAREAN SECTION?

Herpes represents one of the most common viral STDs in the U.S. Although some studies indicate that 5% of reproductive-aged women reported having a history of herpes infection, **fully, 30% of women in the U.S. demonstrate antibodies against the virus.**

In regard to risk, having a first outbreak during pregnancy represents the largest risk to the fetus, with a 30% chance of transmission from mother to baby. Recurrent episodes don't seem to confer nearly the same risk, largely because of protective antibodies. **The risk of transmission with recurrent episodes appears to be less than 3%.**

We recommend initiating antiviral therapy beginning at 36 weeks gestation. The medication used for suppressive therapy is safe and **causes no harm to the fetus.** The reason we recommend antiviral medications is to prevent obvious outbreaks as well as asymptomatic shedding (it is possible to shed the virus into the vagina without ever feeling like you have an outbreak) at the time of delivery.

If you have an **obvious outbreak or symptoms like you are developing an active outbreak during labor, we will recommend a cesarean section,** thus bypassing the area where most women develop outbreaks. **For women who have non-genital outbreaks, a cesarean section is not necessary.** Instead, we will *cover non-genital lesions with an occlusive dressing* to prevent the spread onto bed sheets, etc. Once the non-genital lesions are covered, vaginal delivery can take place.

We recommend taking **Valtrex 500mg once daily beginning at 36 weeks** (earlier if you have a history of preterm labor or delivery...) if you have **infrequent outbreaks.** *If you have had several outbreaks during pregnancy, we recommend 1,000mg once daily.* **Numerous studies have documented the safety of these medications,** which in addition to suppressing outbreaks in the mother, are also known to pass through the placenta and concentrate in the amniotic fluid, after reaching therapeutic levels in the fetus.

WHAT SHOULD WE DO ABOUT UMBILICAL CORD STORAGE?

With excellent marketing in progress, we are seeing this question more and more frequently. The big marketing question is perfect: **“Wouldn't you do anything to assure the health and welfare of your child? Storing umbilical cord blood is just one more way to protect your child for years to come...”** Who could resist when put this way. *But here's what the American College of Obstetricians and Gynecologists (ACOG, our national specialty organization) says about cryo-storage of umbilical cord blood:* **“ACOG believes that there are many questions about this technology that remain unanswered. Parents should not be sold this service without a realistic assessment of their likely return on the investment. The odds of needing a stem cell transplant are low – estimated at between 1 in 1,000 and 1 in 200,000 by age 18. Commercial cord blood banks should not represent the service they sell as “doing everything possible” to endure the health of children, nor should parents be made to feel guilty if they are not eager or able to invest considerable sums in such a highly speculative venture.”** (From ACOG News Release, December 12, 2001) It is currently unclear whether the stored umbilical cord blood can accomplish all that is described by the companies in a universally consistent manner.

More recently, ACOG has again revisited this topic. In ACOG Committee Opinion Number 399 (February 2008), it was suggested that the odds of needing a stem cell transplant may be approximately 1 in 2700. Since the first transplant was performed in 1988, there have been over 7000 transplants for the correction of inborn errors of metabolism, blood cell malignancies, and genetic disorders of blood and immune system. They still recommend that patients research carefully before moving forward with the process.

Yet even more recently, in Committee Opinion Number 648 (December 2015), the number of transplants increased to about 30,000 since the first one in 1988. Feel free to check this information out on ACOG.org then enter “committee opinion cord blood banking” in the search field.

In a previous edition of this handbook, I mentioned that I am asked to assist in collecting blood for storage for about 3 couples per year. In the most recent year, however, I would say that there has been increased interest in umbilical cord blood storage. I have collected blood for probably 10–12 couples in the last 3 months alone. I don’t encourage or discourage couples from collecting cord blood for storage. I would say however, that if I were to have another child (meaning that my vasectomy has failed miserably...), I would be much more inclined to store blood than I would have been 10 years ago. **That being said, if you and your spouse wish to collect blood for storage, please notify me weeks prior to your delivery and again during your labor.** It cannot be collected in a haphazard manner. *I will draw the blood into the provided containers, and sign my name where you ask, but it is entirely up to you to read and understand the instructions regarding packing, additional testing, paperwork, etc.*

If you are interested in umbilical cord blood storage, please ask us – we have collection kits in the office that we can give to you.

WHAT IS MY BABY’S NORMAL HEART RATE RANGE?

The normal range for an unborn baby’s heart rate is very wide. A heart rate from 120 to 160 beats per minute is considered normal. One rate does not indicate “good health” more than another, and unlike what you may have heard, you can’t tell the sex of the baby by his or her heart rate. Additionally, the rate will likely be different each time you come in. We check the heart with a device that uses sound waves to identify and calculate the rate. This “Doppler” device will tell us the average heart rate at the time we listen. We will then let you know. Don’t be concerned if one visit you come in and the rate is 155 and the next time we check it is 123. It does not mean that anything significant is going on with your baby. Typically, the heart rate is slower when the baby is resting and is elevated if the baby is exercising in the womb.

I NEED TO SEE THE DENTIST. WHAT MAY AND MAY NOT BE DONE?

Pregnancy should not steer you away from taking good care of your teeth. Some changes you may notice are gum sensitivity and gum swelling. If mild, this is to be expected. If you go to the dentist for routine care, **dental x-rays may be taken.** Just make sure they **use an abdominal shield** to protect your baby. The radiation produced from dental x-rays is *very* low; so don’t be worried. With abdominal shielding, your baby will not be harmed. If you are in need of more invasive dental work, you can let your dentist know that from an obstetric standpoint, **numbing anesthetics such as Lidocaine or Novacaine are safe, although we discourage the use of epinephrine.** As long as you are not allergic, **antibiotics that are Penicillin-based, Keflex, or Erythromycin should be fine.** **Pain medications such as Tylenol with Codeine or Vicodin are safe to take during pregnancy.**

CAN I GET A MASSAGE DURING PREGNANCY?

Absolutely!! Nothing can make you feel better than a massage performed by a therapist who works a great deal with pregnant clients. As pregnancy advances, muscles can stretch and become strained trying to maintain a normal posture and center of gravity. Sore muscles and joints are not likely to cause permanent harm but can sure be uncomfortable. The Women's Health Center staffs a full-time pregnancy massage therapist who understands what techniques work best at any stage of pregnancy. **HUSBANDS:** This is a good opportunity for you to let your wife know that you have **NO IDEA HOW SHE FEELS** but want to show her that you love her and want her to feel better...

MY CERVIX WAS CHECKED AND NOW I'M BLEEDING. IS THAT DANGEROUS?

Not usually. When we examine your cervix beginning at 36 weeks (in some circumstances before), bleeding may result. Bleeding typically lasts only a day and one half and consists mostly of spotting; so don't be too alarmed. At term the cervix is so vascular that it is not surprising that some bleeding occurs as our fingers gently stretch the cervix during our evaluation of cervical dilation. If the bleeding is heavy like a period or persists longer than expected, please notify us immediately so we can further evaluate the source of bleeding.

HOW OFTEN DO YOU USE THE VACUUM OR FORCEPS?

When I was in residency training at Los Angeles County USC Medical Center, I used forceps with great frequency. At that time the hospital was the busiest in the nation, delivering nearly 18,000 infants per year. At any given time, there would be 30 women laboring at once, and about 8-9 residents and interns to care for them. We had only six O.R. rooms in which to deliver them. If they weren't able to make it to one of the available rooms to deliver, then they would deliver in the labor room, with 3 other laboring women watching (much different from John Muir's private labor and delivery rooms). As a result, we didn't have much time to allow the women to push, because there were other women waiting for the rooms to clear out so they could deliver. So we'd wheel the women in, transfer them to the delivery table, put forceps on, deliver the baby, repair any lacerations or episiotomies, transfer them back onto the gurney, and wheel them out. It wasn't always like this, but some days it would be. After all, we'd deliver up to 80 infants in a 24-hour period. **WHEW!!** I'm glad those days are over!!

In the past 16 years that I've been in private practice, I've never had to put on forceps. With enough time, most women are able to deliver their babies with their own effort. There are occasions, however, when assistance is needed to deliver the baby. For these occasions, **I use the vacuum.** Historically, **I've consistently used the vacuum to accomplish approximately 6% of my deliveries.** My approach is very conservative, and **I'll only use the vacuum if I'm confident that I can safely accomplish the delivery.** Over the years, I have had to perform very few cesarean sections for an "unsuccessful attempt at vacuum delivery."

The vacuum instrument is very helpful in situations where the mom needs assistance. **The usual indication for the vacuum is when a mom has pushed for hours and has approached exhaustion.** Sometimes all that is needed is a little extra oomph to bring the baby completely around the pubic bone in the birth canal, which then leads to delivery. **Another use for the vacuum is to expedite delivery in situations where the baby is not tolerating labor well during the second stage (pushing stage) or will not tolerate a prolonged second stage.**

When I use the vacuum, the baby has to be low enough in the pelvis to the point where I am confident delivery can be accomplished. **I'll feel comfortable pulling through the duration of three contractions, but rarely more.** If my sense is that the attempt won't be successful during the course of the first several pulls, I won't hesitate to abandon the attempt. **If the pulls aren't successful or if I abandon the attempt, I'll recommend cesarean delivery.** *My goal is "healthy mom, healthy baby."* I'm not interested in lowering my cesarean section rate. It's already low enough.

I feel comfortable with risks involved with the vacuum, so much so that *I didn't mind at all when my wife's obstetrician recommended and used the vacuum to deliver my second daughter.* The complications that arise from the vacuum are rare, and include minor **scalp abrasions** and occasionally **small lacerations**, and **hematomas** (blood collections). The types of blood collections include the **more common and less traumatic "cephalohematoma," occurring in up to 14%** of vacuum deliveries, and the **more rare but more traumatic "subgaleal hematoma," occurring in up to 2.5% of vacuum deliveries.** Interestingly, these two types of hematomas can also occur (although less frequently) in spontaneous, un-assisted deliveries and in cesarean sections. **When these complications occur, the infants are watched very carefully for resolution.**

Again, I do not use the vacuum frequently, and I'll only recommend its use if I think your infant is in potential jeopardy or if I think that you will be unable to deliver with your own pushing attempts.

CAN I PAINT THE INSIDE OF OUR HOUSE DURING MY PREGNANCY?

Indoor paints contain Latex base, which has not been shown to be harmful. My best recommendation would be first to let someone else do it, unless you love to paint and love to clean up the mess after you're done painting. If you decide to tackle the project yourself, make sure the room is well ventilated. Masks are not usually helpful to prevent breathing fumes unless you're wearing an industrial grade mask. If you find you're getting nauseated or dizzy while painting, there is obviously not enough ventilation, and you should abandon the project and let someone else do it for you. After the painting has been completed, you will still smell fumes for some time. Again, this should not cause harm, but make sure increased ventilation helps to dissipate the fumes in a short period of time.

FLU SEASON IS JUST AROUND THE CORNER. SHOULD I GET VACCINATED?

The American College of Obstetrics and Gynecology (ACOG) and the U.S. Public Health Service have recently expanded their recommendations for influenza vaccination to include all pregnant women during flu season, regardless of their gestational age. **Although the CDC states vaccine containing thimerosal (a preservative containing a small amount of mercury) is safe for use in pregnancy, California recently passed a law mandating the use of preservative-free vaccine when available.** So, if you're pregnant during flu season, please call your primary care physician to receive the influenza vaccine. It's safe. That's why we recommend it. If the preservative-free vaccine is *not available*, the CDC (and California State government) still recommends receiving thimerosal-containing vaccine.

SHOULD I GET VACCINATED FOR WHOOPING COUGH?

The CDC and the American College of Obstetrics and Gynecology (ACOG) strongly recommend all pregnant women to receive the Tdap vaccine during their pregnancy, **whether or not they have ever been vaccinated before.**

Pertussis, commonly referred to as whooping cough, is a highly contagious respiratory illness that is caused by the bacterium *Bordetella pertussis*. The disease is characterized by uncontrollable, violent coughing, which makes it hard to breathe, and often results in an inspiratory “whooping” sound after a coughing fit. **Pertussis most commonly affects infants and young children and can be fatal, especially in those less than 3 months of age.**

Tdap given to pregnant women will stimulate the development of maternal antipertussis antibodies, which will **pass through the placenta, likely providing the newborn with adequate protection** against pertussis in early life until they are old enough to be vaccinated themselves. **Tdap may be administered any time during pregnancy, but vaccination during the third trimester from 27 – 36 weeks is considered best** in allowing for the highest concentration of maternal antibodies to be transferred to the baby closer to birth.

If you have questions about the Tdap vaccine, please ask. It is most commonly administered at a primary care physician office or local pharmacy. We will give you a prescription for this vaccine at roughly your 24-26 week visit.

SHOULD I WEAR MY SEATBELT WHILE DRIVING?

The American College of Obstetrics and Gynecology (ACOG) clearly recommends the use of seatbelts during pregnancy. Fetal risk is dramatically reduced in moms who are wearing their seatbelts when involved in automobile accidents. Additionally, there is no evidence that airbag use is detrimental to the pregnancy. So we definitely recommend that you wear your seatbelt at all times while driving. The lap belt should be placed under your belly and across your upper thighs. It should be worn snugly, but comfortably. Make sure the shoulder restraint is placed between your breasts and across your shoulder (Never slipped off your shoulder). **IF YOU ARE INVOLVED IN AN AUTOMOBILE ACCIDENT, NO MATTER HOW MINOR, PLEASE CALL OUR OFFICE AS SOON AS YOU CAN. IF YOU ARE INJURED AND NEED IMMEDIATE ASSISTANCE, CALL 911 FIRST.**

I AM THE VICTIM OF DOMESTIC VIOLENCE. WHAT SHOULD I DO?

Unfortunately, 2 million women report being abused in the home every year. Some studies reveal that domestic violence is found in 1% to 20% of pregnancies. The outcomes are never good. Please tell us if you do not feel safe in your home because of physical or mental abuse. Understand that in the future, you may not be the only victim...

IS DELAYED CORD CLAMPING AT BIRTH A GOOD IDEA?

Here is the bullet: It has been suggested that you can increase iron stores in infants by delaying the clamping and cutting of the umbilical cord until the cord spasms and stops pulsating. And this appears to be true. At 3 and 6 months, infants with delayed cord clamping had 8% incidence of iron deficiency compared to 14% of early cord clamping infants, according to a 2013 “meta-analysis” of 15 randomized trials out of Australia. This meta-analysis was considered to have only “moderate bias.” It is important to keep in mind that also in this study, late cord clamping resulted in a 40% increase in newborns requiring phototherapy for jaundice. So on this one, pick your poison.

There is no doubt, however, that delayed cord clamping is beneficial for preterm infants or those women in third world countries, where there is rampant maternal iron deficiency anemia and malnourishment among pregnant women. A 2012 meta-analysis of 15 studies concluded that premature infants demonstrated less iron deficiency anemia, less need for blood transfusion after birth, lower risk of developing necrotizing enterocolitis, and fewer infants developing intraventricular hemorrhage. Surprisingly, these infants did not demonstrate an increased risk for jaundice requiring phototherapy.

To “perform” delayed cord clamping properly, the infant is held at the level of the perineum after complete delivery for roughly 90 seconds to 2 minutes. Then the infant is placed on the maternal chest and the cord is clamped and cut (by dad...). Makes resuscitation, if needed, challenging, especially if meconium is present.

The American College of OB/GYNs offered a “Committee Opinion” in December 2012, where they concluded, **“Currently, insufficient evidence exists to support or to refute the benefits from delayed umbilical cord clamping for term infants that are born in settings with rich resources. Although a delay in umbilical cord clamping for up to 60 seconds may increase total body iron stores and blood volume, which may be particularly beneficial in populations in which iron deficiency is prevalent, these potential benefits must be weighed against the increased risk for neonatal phototherapy.”** So if you are malnourished or are interested in your baby requiring a little suntan therapy after birth, please let us know. We will be happy to accommodate your wishes on this. I, as a physician not bound to whimsical internet advice, don’t think it is warranted unless your baby is premature, or sick in some other way that would benefit with more blood.

I WANT TO TAKE MY PLACENTA HOME AND ENCAPSULATE IT

You got me on this one. Knock your socks off! We’ll bag it up for you to take home. In solid medical literature, there is one big black hole of information on this topic. It is said to cure just about everything like snake oil in the 1800’s, despite the complete absence of quality medical studies on it. Yet, people make a bundle on this (and spend a bundle...).

My questions are always the same: what is the dehydration process like? What about sterile technique? Any quality controls? What happens to the proteins in the placenta? Are they denatured (rendered useless)? What about bacteria if you had an infection during labor? And how is it that the placental hormones that PREVENT women from initiating lactation during pregnancy all of a sudden HELP them produce more milk when they take the encapsulated pills? Lastly, what does powdered meconium taste like? Sorry, the scientist and the cynic in me is coming out...

In the complete absence of quality medical information about this, I would probably advise against it. Although the risks are likely low, they are at best, unknown.

Prenatal Vitamins

Because of the increased nutritional demands during pregnancy, prenatal vitamins are essential. Prenatal supplements must provide increased amounts of folic acid, calcium and iron for both mother and baby. Research conducted over the last decade has verified the importance of specific supplementation before and throughout pregnancy.

Folic acid, in the amount of 1 mg per day, is now recommended to protect against neural tube defects (spina bifida, meningomyelocele, and anencephaly). By consuming adequate amounts of folic acid, 70% of all such neural tube defects may be prevented as well as other birth defects including cleft lip and palate, cardiovascular, urinary tract and limb defects. Because many of these structures form very early in pregnancy, we strongly recommend beginning supplementation prior to attempting conception. As pregnancy is not always a planned event, we recommend starting as soon as pregnancy is diagnosed. If you're looking at food sources for folic acid, try increasing the amount of green leafy vegetables, dark yellow or orange fruits and vegetables, liver, legumes and nuts, fortified breads, rice and pastas in your diet.

Calcium is a very important supplement. It is estimated that more than ninety percent of American women have diets lacking in adequate amounts of calcium. Deficiency of this important mineral has been linked to early onset pregnancy-induced hypertension. Although the exact role calcium plays in this process is not clear, supplementation of **between 1000 and 1500mg per day is recommended.** Understanding that an 8-oz glass of milk contains only 95 mg of elemental calcium makes it clear that supplementation beyond normal dietary sources is required. Other dietary sources of calcium besides dairy products include: sardines and salmon, collard, kale, spinach, turnip greens, and fortified orange juice. My favorite over-the-counter calcium supplement is **Viactiv.**

Iron is needed specifically in pregnancy for the production of fetal and maternal red blood cells. Because there is a natural tendency for anemia to develop during pregnancy, it is important to have adequate supplies of iron for red blood cell production. Low red cell counts have been associated with premature labor, and significant anemia at the time of delivery increases the likelihood of requiring a blood transfusion should an intrapartum or postpartum hemorrhage occur. In pregnancy, the demand for red cell production is so great that it is difficult to meet iron needs by diet alone. Dietary sources of iron include: lean red meat, liver, dried beans, whole-grain or enriched breads and cereals, prune juice, spinach, and tofu. My favorite over-the-counter supplement is **Slow-Fe or Bifera.**

Our Recommendation...

In choosing a prenatal vitamin we recommend prescription-strength, non-generic supplements that are sure to provide adequate quantities of folic acid, calcium, and iron because of superior absorption characteristics. Generic brands simply are not reliable with regard to absorption characteristics. **We will be happy to provide you with a prescription for a suitable prenatal vitamin. Keep in mind that there are multiple brands of excellent prenatal vitamins in varying sizes, shapes and textures. If one doesn't agree with you, chances are we can find one that will.**

Medications and Pregnancy

Most medications can be safely used during pregnancy; however, we recommend their use only when clearly indicated. We have prepared a list of most medications that are commonly used during pregnancy. Although sometimes necessary, it is best to avoid use of medications during the interval period of “organogenesis.” This begins at week 6 and continues until about week 10.

Sore Throat/Cough Lozenges:

1. **Cepacol, Halls, or Robitussin**

Cough & Cold Preparations

1. **Tylenol** for general aches and pains, including joint pain and headaches and body aches. Use in such doses as necessary. As one regular Tylenol rarely will make a person feel any better, take it in the same way you would if you were not pregnant. **Tylenol PM** may be taken at night.
2. **Sudafed** or **Actifed** for runny nose and congestion
3. **Robitussin DM** for cough. **Robitussin AC** is available by prescription for patients with a cough not relieved by Robitussin DM and who are not allergic to Codeine.
4. **We still recommend rest, chicken soup, and time as the best medication for colds.** Antibiotics are widely desired by patients for colds, but unfortunately colds are almost universally **VIRAL** in origin, which means that antibiotics are not helpful in their treatment, unless they last longer than 10 days.
5. **Other cough syrups, pills, and multi-symptom preparations:**
 - a. **Robitussin** (Dextromethorphan Hydrobromide)
 - b. **Triaminic** (Phenylpropanolamine/Chlorpheniramine)
 - c. **Dimetapp**
 - d. **Thera-flu** (Dextromethorphan/Chlorpheniramine/Pseudoephedrin)
 - e. **Actifed Cold & Sinus** (Triprolidine)
 - f. **Vick’s Nyquil or Dayquil**
 - g. **Mucinex**

What do the ingredients in cough syrups do?

Guaifenesin. Works as an expectorant. It makes lower respiratory tract fluid less viscous, which promotes removal of more mucous by making a dry non-productive cough more productive & less frequent

Phenylpropanolamine acts on alpha adrenergic receptors producing vasoconstriction, which results in shrinkage of swollen mucous membranes and an increase in nasal airway patency. This medication may cause drowsiness.

Pheneramine maleate is an “anti”-histamine. Histamine release causes capillary leaking, which leads to swollen mucous membranes. Marketed also as Brompheniramine and Chlorpheniramine.

Dextromethorphan is simply an anti-tussive or anti-cough medication that raises a person’s threshold for needing to cough.

Allergy Medications

1. **Benadryl or Actifed** (can make you pretty drowsy...) or **non-drowsy sudaphedrine**
2. **Tavist-1 or Chlortrimaton**
3. **Afrin** nose spray (its use may be physically addicting because of rebound symptoms when you stop using it. Therefore, we like to limit its use to 3–4 days only)
4. **Claritin, Zyrtec, Allegra** are safe and VERY effective, and now available without a prescription.
5. **Naso-cort or Flonase** are safe for seasonal allergies.

Medications and Pregnancy, continued...

Yeast Infections

1. Over-the-counter preparations such as **Monistat** or **Gyne-Lotrimin** are safe to use in pregnancy. The applicators can safely be inserted up to two inches into the vagina. If used only externally, yeast infections will rarely be treated appropriately.
2. Oral yeast medications such as **Diflucan** should probably be used as a second line medication and only after the end of the first trimester, since the vaginal preparations have such a well-established safety profile. **Diflucan** can, however, be used freely while breastfeeding.

Nausea & Vomiting

When the usual preventative measures you have read about do not work well enough, we can *prescribe* a number of medications, depending on severity and duration of symptoms. At times, medications alone aren't enough. For prolonged periods of nausea and vomiting, severe dehydration may result, which may require hospitalization for rehydration and electrolyte management.

1. **Compazine** or **Phenergan**. Both come orally or in rectal suppositories.
2. **Reglan**. This stimulates gastric muscles to empty the stomach quicker, thus decreasing nausea.
3. **Zofran**. A powerful anti-nausea medication used for stubborn cases. *This works very well.*
4. **Diclegis**. The active ingredients in this medication have been around for a LONG time and have proven to be very safe during pregnancy. The dosing regimen is a little complicated, but it is long lasting, and very effective.

Headaches

1. **Tylenol** usually suffices. Take 2–3 extra-strength if needed.
2. **Advil** is safe to use for headaches that occur *infrequently* until 30 weeks of pregnancy, after which we discourage its use.
3. For migraine sufferers, we typically prescribe **Midrin**, which is taken as follows: 2 pills orally, followed by 1 pill every hour until headache is gone. There is a maximum of 5 pills used per 12 hours.
4. Alternatives for severe headaches include **Tylenol with codeine** or **Vicodin**.

Skin Rashes

1. **1% Hydrocortisone cream**. Since this medication is poorly absorbed through the skin and does not cross the placenta, it is recommended for use with various skin rashes.

Hemorrhoids

1. **Hydrocortisone cream 1%**. This works well. For severe hemorrhoids, this may be obtained via prescription in a stronger **2.5%** formula.
2. **Cortizone 10**
3. **Preparation H – useless in my opinion**
4. **Anusol HC**
5. **Tucks medicated pads** (contains 50% witch hazel)
6. **Nupercainal**

Diarrhea

1. **Kaopectate** or **Imodium AD**. If diarrhea persists for several days despite use of these medications, please let us know.

Constipation

1. **Colace** 100mg twice daily
2. **Milk of Magnesia** 30 cc twice daily
3. **Metamucil**

Medications and Pregnancy, continued...

Gas Pain

1. Gas – X
2. Simethicone

Milk Intolerance

1. Lactaid
2. Dairyease

Indigestion or reflux (GERD)

1. Tums, Maalox or Mylanta
2. Zantac 150 once or twice daily (my personal favorite), Prilosec 40mg, or Pepcid AC

Vaginal Dryness

1. Replens, Lubrin, and Vagisil all work well as needed.

Sleep Aids

1. Benadryl/Tylenol P.M.
2. Hot shower
3. A *very occasional* glass of wine
4. Boring book

Muscular aches and pains

1. Tylenol for minor aches and pains of pregnancy. The most common safe medication taken.
2. Advil is safe to use *periodically* until 30 weeks of pregnancy, after which we discourage its use.
3. Flexeril is a potent muscle relaxer that may be used safely in pregnancy for severe muscle strains. This comes by prescription only.
4. Rest and a heating pad. Probably the best medicine.

Herpes Virus Outbreaks (oral or genital lesions)

1. All of the medications related to Acyclovir may be used during pregnancy. This list includes Zovirax (oral capsules or cream), Valtrex, and Famvir.

Antibiotics

Safe antibiotics include: Amoxicillin, Penicillin, Zithromax (azithromycin), Erythromycin, clindamycin, Keflex, and topical triple antibiotic ointment (Neosporin). Macrobid can be used *but should be avoided during the last few weeks of pregnancy and while breastfeeding*.

The antibiotics **NOT** recommended during pregnancy include Doxycycline and Tetracycline, and sulfur-containing antibiotics.

Vaccines safe to receive during pregnancy

Tetanus – diphtheria booster (every 10 years normally, but definitely you should get this during each pregnancy, even if closely spaced), **Hepatitis A**, **Hepatitis B**, **Influenza** (now recommended for all pregnant women during flu season, regardless of gestational age), and **Pneumococcal**.

Miscellaneous:

Other medications for medical conditions include the following: Synthroid/levo-thyroxine for hypothyroidism, inhalers for asthma such as Proventil, Albuterol, atro-vent, and steroid-containing inhalers, Terbutaline or Nifedipine for premature labor, and Progesterone suppositories or tablets for bleeding early in pregnancy; these medications can be used safely during pregnancy.

Exercise During Pregnancy

We generally recommend exercise through the entire course of the pregnancy. Some special circumstances during your pregnancy may cause us to change our recommendation for you. In general it is a good idea to **keep up regular exercise on a near-daily basis**. Medical studies have shown that women who exercise during the entire course of their pregnancy tend to experience **less discomfort during pregnancy** and **less pain during labor**. Additionally some **labors are thought to progress quicker** in women who have been participating in regular aerobic exercise.

There are some things that are important to consider when deciding which exercises will be best for you.

1. **Increased Stress on Joints:** Hormones produced during pregnancy cause ligaments that support the joints to become relaxed. This is especially true later in pregnancy. This will make your joints more mobile and at risk for injuries. Therefore we would discourage you from participating in jerky, bouncy, or high impact motions that would increase your risk of injury.
2. **Balance:** As the uterus grows, you will be carrying as much as 20 to 30 pounds by the end of your pregnancy, primarily located in the front of your normal center of gravity. This will affect your balance and again place you at risk if you are participating in higher risk exercises. Additionally, the shift in balance will cause more back pain and back strain.
3. **Heart rate:** Current recommendations regarding maximal heart rate during exercise have been removed from the American Congress of Obstetrics and Gynecology's opinion on exercise during pregnancy. A recent article written by exercise guru and my former mentor at USC mention that heart rate monitoring was inherently inaccurate and instead a numeric scale on perceived intensity should be adopted. However, to simplify, I would simply recommend that if you can carry on a conversation while exercising, you should be fine. If you are gasping for air while you are exercising, you are likely overdoing it. Relax. You are exercising, not running from the police...

It is important to choose safe exercises, keeping the above in mind. Most exercises are safe during pregnancy. However, we would discourage you from exercises such as water skiing, snow skiing (after 16 weeks), surfing, scuba diving (because of pressure changes), roller-blading, horseback riding, mountain biking, and *high*-impact aerobics. Additionally, we would recommend that you avoid deep knee bends, such as squats, and exercises that cause you to strain in the same way as if trying to have a bowel movement when constipated (we'll save this exercise for labor and delivery...).

Exercises we would encourage are walking, jogging, walking on a treadmill, cycling on a stationary bike, and using a Stairmaster or Orbitrek elliptical trainer. The exercises I recommend most are swimming (best for overall toning, strengthening, and stamina), walking hills, or riding a stationary bike. Sit-ups may be done early in the pregnancy; however, after approximately 20 weeks of pregnancy, you will find that it is more uncomfortable to do sit-ups, and you will see little benefit. Modified small crunches can be done during the entire pregnancy to maintain strength in your abdominal muscles.

During the course of exercise, remember to **keep yourself well hydrated**. Constantly take sips of water to prevent dehydration and to keep your body cool.

Dress so that you **stay cool as you exercise**. Do not bundle up too much and increase your core body temperature.

It is best to start with a **5-minute warm-up** to prevent joint or muscle injury and to end with a **5 to 10 minute cool-down period**. The length of time that you exercise is entirely up to you, but 45 minutes at a shot seems like a good time period, and can be done every day.

Please call us as soon as possible if you experience any chest pain or unusual shortness of breath during exercise. You should also contact us if you experience an irregular heartbeat, bleeding or a gush of water from the vagina, or contractions every 10 minutes or closer for at least two hours that do not resolve with rest (and if you are less than 36 weeks).

Again, the benefits of exercise clearly outweigh the risks. We would encourage you to continue until the end of pregnancy and be consistent on a near-daily basis along the way.

Travel During Pregnancy

Most women can travel safely until 36 weeks by following a few simple guidelines. Women who have special health problems that may need special medical care should consult their doctor prior to any travel, as it may not be advisable.

The most comfortable time for most pregnant women to travel is during the second trimester (14-28 weeks of pregnancy). We do not recommend travel in the late third trimester unless specifically cleared by the physician.

A copy of your prenatal records should be obtained and carried with you at all times beyond 24 weeks of pregnancy. You may request this from our receptionist prior to your departure.

TIPS FOR PLANE TRAVEL:

Keep your plans simple. As pregnancy can become suddenly complicated, where travel should be restricted, you may want to consider travel insurance for non-refundable tickets.

Get an aisle seat so that you can walk around and get to the bathroom easily. Also do leg extension and flexion exercises to help prevent swelling and leg cramps.

The **forward part of the plane** usually provides a more stable ride.

Wear a few layers of light clothing that will allow you to bundle up or remove a layer or two. Wear shoes, and clothing that doesn't bind.

Eat lightly to avoid being airsick. Take some crackers, juice, or other light snacks with you to prevent nausea.

Drink plenty of fluids because the air in the cabin is dry.

Walk around frequently – every hour or so. This decreases swelling and helps make you more comfortable.

TIPS FOR AUTO TRAVEL:

Make each day's drive short enough to be fun. **No more than five or six hours of driving each day is a good target.** Take 10–15 minute "stretch" breaks every hour.

Air bags do not replace seat belts. It is always safer to **wear a seat belt** than not to wear one. Unless the mother has a serious injury, the fetus is not likely to be harmed. However, if you are in an accident, you should call us and come in so that we can make sure that you and your baby are okay.

Flexion and extension of the legs periodically will help with swelling and leg cramping if they occur. Do these frequently as a preventive measure.

TIPS FOR FOREIGN TRAVEL:

When traveling to areas that may expose you to the bacteria that cause traveler's diarrhea, we recommend the following:

- Drink only pure bottled water, canned or bottled juices and soft drinks, or pasteurized dairy products. Don't put ice in your drinks.
- Drink only out of paper cups or from the bottle or can itself. Don't drink out of glasses that may have been washed with unpurified water.
- Eat fresh fruit and vegetables only if they have been cooked or peeled.
- Avoid raw or undercooked fish or meat.

When you are **traveling abroad** to areas of the world that may expose you to different and unusual illnesses, you may want to check out the **CDC's web site (www.cdc.gov) for world travel health information.**

Medical problems

1. **Hypertension.** High blood pressure may be pre-existing to pregnancy, called “chronic hypertension” or may arise during pregnancy. If you have chronic hypertension, it is important that the condition is under control prior to conception. Some anti-hypertensive medications are not safe during pregnancy. Therefore, it is important that you speak with us so that you may change your medication if needed to one that is known to be safe during pregnancy. Major risks during pregnancy in women with chronic hypertension include having a baby that is too small (called intrauterine growth restriction) or premature separation of the placenta from the wall of the uterus prior to delivery. In addition, chronic hypertension may lead to a potentially more serious hypertensive illness known as toxemia. **FREQUENT BLOOD PRESSURE MONITORING AND FETAL TESTING LATER IN PREGNANCY IS PARAMOUNT TO ACHIEVING A HEALTHY OUTCOME.**
2. **Diabetes.** This condition, if it exists prior to pregnancy, should absolutely be under control prior to conception. There is a blood test called Hemoglobin A1C that will indicate the adequacy of glucose control prior to conception. The reason that control prior to conception is important is that diabetes is associated with a high rate of fetal malformations if it is not controlled before the period of organogenesis (6–10 weeks of pregnancy or 2–6 weeks past a missed period). If you take insulin regularly for a longstanding condition, it is probably best that a perinatologist take care of you for the duration of your pregnancy. Risks associated with “pre-existing diabetes” include development of toxemia, polyhydramnios (overproduction of amniotic fluid, which can cause premature labor and delivery), macrosomia (a larger-than-normal baby that may complicate a spontaneous vaginal delivery), birth defects, miscarriage, and stillbirth. If you have had “gestational diabetes,” or pregnancy-induced diabetes during a previous pregnancy, then you should have early testing to see if the condition is recurrent. It is okay to be cared for by a regular obstetrician as long as you attend visits at a hospital-based diabetes center. If you require insulin during pregnancy, we will help you coordinate the start and maintenance with an endocrinologist. If insulin is started, it will be important to monitor your baby later in pregnancy with twice-weekly visits to the hospital.
3. **Asthma.** This lung disorder that causes wheezing and breathing problems fortunately does not necessarily worsen because of pregnancy. Most women with asthma can go safely through pregnancy. Most of the medicines are safe to take (check out the Medications in Pregnancy section). Pregnant women with acute exacerbations should be treated aggressively to maintain good oxygen flow to the growing fetus.
4. **Epilepsy.** If you have a seizure disorder, you will need to discuss which medication you are taking, as some medications are to be avoided during pregnancy. As a general rule, however, if your seizures have been frequent but are controlled on a specific medication, we will most likely keep you on that medication for the duration of your pregnancy. In this situation, the risk of the illness is greater than the risk to the fetus.
5. **Lupus and other rheumatologic illnesses.** Systemic lupus erythematosus (SLE) is a disease that can affect nearly every organ system in the body. There is an associated risk of miscarriage, preterm birth, fetal heart defects and arrhythmias, and stillbirth in pregnancies complicated by SLE. Typically, pregnant women with SLE and other arthritic illnesses such

as rheumatoid arthritis will need perinatology consultation early in pregnancy. In addition, corticosteroids (safe for the fetus) and aspirin-like medications will need to be taken during pregnancy.

6. **Thyroid disease.** The demand for thyroid hormone increases during pregnancy. If you have hypothyroidism, it will be important to make sure your dose is adjusted correctly prior to the start of your pregnancy. Interval blood tests will reveal whether or not your medication will need to be increased or decreased. If your condition is under control, you should anticipate no problems related to the thyroid gland during your pregnancy.
7. **Heart disease.** Mitral Valve Prolapse (MVP) is very common and should not complicate your pregnancy. If you have MVP, you will need to take prophylactic antibiotics during labor and delivery or for any invasive procedures. Other structural heart defects must carefully be reviewed, as some are quite dangerous for a woman because of fluid changes associated with pregnancy. If you are aware that you have a structural heart defect such as mitral stenosis, Tetralogy of Fallot (uncorrected), Marfan syndrome, pulmonary hypertension, or a history of a myocardial infarction, please discuss this early in pregnancy. You will need to see a perinatologist due to the high-risk nature of these defects.

If you are aware of any other medical problem that you feel may cause a problem for you during your pregnancy, please let us know. Consultation will be available for you if necessary.

“Slap-Cheek”

The agent that causes “fifth disease” (erythema infectiosum, or “slap-cheek”) is actually a VIRUS called **parvovirus B19**. It affects only humans, and it is transmitted by spread of respiratory secretions and hand-to-mouth contact. Many pregnant women are concerned about exposure and the potential effects on the fetus. We have listed “the true facts” related to the virus:

1. The infected person is contagious 5–10 days after exposure, yet prior to the onset of the characteristic rash or other symptoms.
2. **Approximately 50% of pregnant women are IMMUNE to parvovirus B19. In other words, half of women can’t get it because they’ve had it before and are unlikely to get it again.**
3. Only 5% of women who are casually exposed will become infected (if they are part of the susceptible 50%).
4. Susceptible women who have intense and prolonged exposure to parvovirus B19 infection (teachers in a school with a parvovirus epidemic) have about a 20% risk of infection.
5. Women in households where children or other household members are infectious have up to a 50% risk of infection.
6. When maternal parvovirus B19 infection occurs in pregnancy, **THE FETUS IS USUALLY NOT AFFECTED**. The maternal-fetal transmission rate is about 20%.
7. The risk of fetal death related to infection appears to be less than 10%. The major risk of infection is miscarriage (between 10 and 20 weeks). Fetal anomalies (deformities) have *not* been associated with maternal infection.

What to do if exposed:

If you are **directly** exposed to “slap-cheek,” don’t panic. First, let’s find out if you’re immune. **Call us and we’ll send you for a blood test** to see if you’ve been exposed and built up antibodies against the virus some time in your past. **If the blood tests indicate that you’re immune, that’s the end of it. No risk for you or baby.** If you are not immune, we’ll have you return in three weeks to have the same blood tests to see if you’ve become infectious.

If you become infectious, we will begin following you with ultrasounds to see if the growing fetus begins to show signs of infection. Keep in mind that the **FETUS IS USUALLY NOT AFFECTED...**

One extra note: If your child was exposed to another child infected with Parvovirus B19 at school, it does not count as an exposure to you!

Group B Streptococcus (Beta-Strep)

Since the early 1970s, the bacteria called Group B streptococcus (GBS) has been identified as a cause of infections in newborn babies. This bacteria is normally found in the vagina and/or lower intestine of roughly 30% of all healthy, adult women. It is not considered to be a sexually transmitted disease. Women who test positive for GBS are considered to be “colonized.” Group B streptococcus should not be confused with the streptococcus that causes strep throat. Fortunately, there is testing and a preventive treatment available that can help prevent neonatal GBS infections.

GBS and Pregnancy

If 1,000 women had a vaginal culture taken, about 30% would test positive for GBS. Because GBS usually does not cause symptoms, most women who harbor it in the vagina do not know it. Yet, it can cause serious illness in babies born to women who are colonized with the bacteria during childbirth.

Out of every 1,000 births, one to two babies will become seriously ill with GBS if the mother is *not* treated during labor. This illness can consist of pneumonia and/or meningitis, and can unfortunately be fatal.

Risks of GBS increase when labor is premature, when there is premature rupture of membranes, when there is prolonged rupture of membranes before the baby is born, if the mother has a fever before or during labor, and in women who have a history of GBS previously. The risks may be much less if the labor is rapid.

How Do I Know if I Carry GBS?

We will perform a vaginal culture during your routine visit between 35 and 36 weeks. We use a small Q-tip sized swab that we place into the vagina and around the anus to obtain a culture. Sometimes, GBS can be present in small amounts on one day but not on another, which could result in a negative culture on the day we do the test. Therefore, one negative culture result does not guarantee that you will be negative on the day you deliver. This is another reason why pre-pregnant history is important, too. For moms who have had a positive culture previously, we just assume the culture would be positive and would treat them accordingly. We don't need to repeat the culture. **If you test positive, we will document the result in your chart and it will be available for review when you go into labor. PLEASE ASK US FOR THE RESULT DURING THE NEXT VISIT AFTER IT IS DONE.** Regardless, we will know the result and treat you accordingly when you come to the hospital in labor.

What To Expect If You Test Positive

If you test positive for GBS, we will treat you intravenously during labor with an appropriate antibiotic. Giving antibiotics intravenously to the mother during labor can reduce by 50% the frequency of serious GBS infection in the baby after birth or during the first week of life. Treating the mother with oral antibiotics earlier in pregnancy may decrease the amount of GBS for a short time, but it will not eliminate the bacteria completely. Also, waiting to treat the mother or baby with antibiotics after birth is often too late to prevent illness, which is why IV therapy during labor is recommended.

Kick Counting

Fetal movement awareness (or baby kick counting) has long been known to indicate the well-being of the baby while inside the uterus. The range of normal fetal movements varies greatly between babies and pregnancies. Unfortunately, there is no exact number of baby movements that automatically indicates that the fetus is at risk for problems or may be developing a problem. Studies have shown, however, that an **unusual decrease in fetal movements may often be associated with a baby in distress or a baby somehow in jeopardy inside the uterus**. An increase in movement is NOT associated with fetal distress.

By counting your baby's movement, you can monitor the baby yourself to reassure you and us on a daily basis that all seems to be going smoothly for the baby before it is born.

Kick counting is usually easier to interpret later in pregnancy but can be done whenever the fetus has well-established movement patterns (usually after 28 weeks). We would ask that you **initiate kick counting whenever you perceive that there has been a decrease in the baby's usual activity pattern**. Here are some guidelines to help you count:

1. When counting fetal movements, try to lie on your side or just sit quietly and comfortably. Baby movements are often difficult to feel or be aware of when the mother is active, so this "test" of movement monitoring requires mom to be in a "quiet" mode.
2. How you perceive "movements" will vary. They may be a "jab," a "roll," a "kick" or you may feel the baby "balling up inside." Whichever of these you feel you should count as one movement. Do not count hiccups and flutters as "movements." If you are having difficulty feeling movement from "inside," try placing your hands on your abdomen.
3. Count "baby kick counts" or fetal movements two to three times a day. It is best to do this after you have completed a meal. This is a time the baby is most likely to move since it responds to your digestive sounds. **The baby should move 4–5 times in the hour following your meal, or 10 times in the 2 hours after you have finished eating.** NOTE: If the baby moves 4–5 times in 15 minutes after your meal, you do not have to continue counting for the whole hour. You can stop counting as soon as you have felt 4–5 movements.
4. If the baby does not move as directed above, get up, drink a big glass of cold juice, and try counting again after about 10 minutes. If the baby still has a decrease in movements, call us at (925) 935-5356 to report your findings. **Call at the time you are testing.** We do not want you to wait. Even if this is on a weekend or at night, **WE WANT TO KNOW ABOUT IT NOW, NOT LATER.** Don't ever feel you are bothering us when you call. This is important.

Thank you for being aware of your baby's activity level and acting on any concern you may have!

Induction of Labor

Pregnant women have vastly different views on the subject of labor induction. In the beginning of the pregnancy, most women think, “I hope I don’t have to be induced.” Invariably, a larger percentage of women at the very end of pregnancy think something far different, such as, “I’m miserable. I can’t believe this yo-yo is making me stay pregnant a second longer. I would do just about anything to get myself into labor so I can get this over with.”

THE MYTH:

“LABORS THAT ARE INDUCED HURT MORE THAN NATURAL LABORS”

THE REALITY:

LABOR HURTS, PERIOD!!!
(THANK HEAVEN FOR EPIDURALS...)

If you measure the strength of uterine contractions in a woman in spontaneous “natural” labor, the strength can be every bit as strong as the strength of labors induced with Pitocin. How do we know? We occasionally place a catheter into the uterus next to the baby that measures the strength of the contractions in millimeters of mercury so we know exactly how strong contractions are.

SO WHAT MAKES PITOCIN DIFFERENT?

The normal progress of labor, **generally** speaking, progresses slowly, with contractions first 30 minutes apart, then 25, then 20 minutes apart. Then they increase in intensity and strength and become 15, then 10, then 5, then 3 to 4 minutes apart. **Nice slow warm-up, building up into the real thing.**

Pitocin may make women acutely aware of strong contractions that may start every 10 minutes, then 5, then 3 to 4 minutes apart. **WHAM!! Labor begins with very little warm-up.** Thus, all of your friends may relate to you that the contractions hurt soooo much more, but in reality the strength may be equal to those experienced by a woman who is in natural labor.

Is that good or bad?? Well, *it depends on your perspective.* If you are admitted to labor and delivery to have your labor induced, contractions are kind of the goal. Otherwise, we would not call it labor induction. We would just call it resting comfortably in a hospital bed, waiting.

Another thought expressed by friends and family looking out for your best interests regarding induction is that, by altering the natural course of pregnancy, you may increase the risk of cesarean section. Certainly lots of good medical studies have proven that the risk of cesarean section increases if labors are induced. **BUT KEEP READING. . .**

MY THOUGHTS ON INDUCTIONS

I am probably in the minority when compared to the opinions of my colleagues in that **I really do not have a problem with the concept of “elective induction.”** Obviously induction is indicated in certain situations, including worsening hypertension, diabetes, or other medical problems complicating pregnancy. Those inductions aside, let’s talk about “I’m tired of this and

want to be delivered” inductions OR other reasons for inductions that are more social and less medical.

My feeling is that **I really do not want to do anything to jeopardize the opportunity of your having a vaginal birth.** But if I feel that an induction will be successful and lead to a vaginal birth, I have no problem with it. **My only requirement is that the baby must be ready** and thoroughly “cooked.” The standard is about **39 weeks** (one week prior to your due date). For inductions prior to this time, there must be a valid medical reason. **Additionally, the cervix must be “ripe”** so that the odds for vaginal delivery are increased. This means that the cervix must be **dilated and thinned** out with the baby’s head low in the pelvis. This is a gestalt feeling on my part (having delivered over 6,000 kids).

SCHEDULING THE EVENT

If you would like to be induced, we need to keep in mind who will be the delivering provider (Sonya, Amanda, or myself...) and on what days they deliver, what your starting cervical exam is, and how many children you have already delivered. **The process is probably more complicated than you would expect, as there are only so many spots for inductions on L&D and there are other doctors with patients wanting inductions as well.** And we all have to play in the same sandbox. That being said, our medical assistant Maria is in charge of scheduling inductions. And always, inductions are considered a reservation, but not a guarantee. The reality is that sometimes L&D is too busy to safely bring women in for elective inductions of labor. In these cases, the dates of ELECTIVE inductions may need to be altered a bit. So, FLEXIBILITY is the key here. My staff and I can only control so much. IF YOU HAVE ANY QUESTIONS REGARDING SETTING UP AN INDUCTION, PLEASE SPEAK WITH MARIA, WHO IS IN VERY WELL WITH THE L&D SCHEDULE COORDINATOR...

SO WHAT IS INVOLVED WITH INDUCTION?

When you are brought in for an induction, all of the procedures that are normally done on labor and delivery will be accomplished as if you were in labor already. An IV will be started and **we will usually begin Pitocin**, starting slowly and then increasing the concentration at 15-minute intervals. Your contractions will begin quickly or they may not become strong until higher doses of Pitocin have been given. At some point in time, usually early in the process, we will come in and **rupture the membranes**, releasing the amniotic fluid from its sac. This will allow the baby’s head to settle against the cervix and help with its dilation. **You can have an epidural whenever you want it**, regardless of how dilated your cervix is. The belief that this slows labor is false, especially since you are on Pitocin.

Women are usually amazed at how smooth induction of labor can be. Rarely will labors be longer than anticipated. Typically, if a woman begins induction at 7:30 a.m., delivery occurs sometime between 12:00 noon and 5:00 p.m. depending on what number baby it is and how dilated the cervix is at the start of the induction. Additional factors to take into account are your expectations and whether or not you have a rigid birth plan. Left to our expertise, labors are usually straightforward and timely. We have delivered thousands and thousands of babies and understand the small details and intricacies that can affect the labor process either positively or negatively. Always keep in mind that a rigid birth plan can derail an otherwise straightforward induction. We will abide by your plan if you insist, as long as no harm will come to you or your baby, even if we know that your plan will end up in a cesarean section.

If an induction is indicated for medical and/or obstetrical reasons, the same type of management plan as described above will be utilized. If the cervix is not “favorable,” however, a different approach is taken. **We may recommend that you come in to the office the afternoon prior to the anticipated delivery day for placement of a cervical balloon catheter that will serve to “ripen” the cervix.** During a speculum exam, a small rubber catheter is inserted through the cervix and then inflated with sterile water. We will then ask you to go into Labor & Delivery later in the evening. Throughout the night, the catheter is then pulled back slowly through the cervix, thus dilating it to about 3.5 centimeters. Once the catheter falls out, it does not need to be replaced. Most women will sleep (restlessly) until morning. The membranes may then be ruptured and the rest of the induction should proceed as described above.

HOW SUCCESSFUL ARE THE INDUCTIONS?

Each year the hospital gives us our “statistics” for how we performed with our obstetric patients; i.e., how many patients we delivered and by which route (vaginally or by cesarean section), how many inductions we performed, how successful the inductions were in achieving vaginal deliveries, etc. This is done to compare ourselves to our peers and for quality purposes. The year 2013 statistics are slightly different from the 2000 stats from the previous edition of this handbook, but all in all, each year’s numbers tend to be very similar. Anyway, here they are:

In the year 2013,

- a. I delivered 265 babies;
- b. I induced the labors of 96 women (this means I induced 36% of the women; the department average was 28%).
- c. **Of those women whose labors were induced, 5 (5.2%) required a cesarean section. Interestingly, the cesarean section rate was higher (7.3%) if labor was spontaneous...**

Certainly if you have any questions regarding my views on labor induction or the methods I use for induction, please do not hesitate to ask!

Vaginal Birth After Cesarean

If you have had a cesarean section in a previous pregnancy, this topic will undoubtedly come up during your prenatal care. I'm sure you'll catch an earful from friends and family about the risks of the endeavor. So let's review some information about "VBAC."

First off, my approach to obstetric care and medical care in general is that **I will never recommend something unless I'd recommend it for my wife, my sister, or my mother.** That being said, my first daughter was born out of necessity by cesarean section. My second daughter was born by the vaginal approach (VBAC). What a wonderful experience both births were! My wife would have to say (and I'd have to agree...) that the recovery from the second birth was far superior compared to that of the first.

Knowing the risks involved with a vaginal birth after cesarean, I felt comfortable with this approach for the birth of my younger daughter. I believe that many women are excellent candidates for the VBAC approach, **but I do not think it is safe for everyone.** I don't hold to hard and fast rules, as they often don't apply to everyone. **I like to assess each pregnant woman individually to determine whether or not she would be a good candidate and that the VBAC route would be safe.**

Interestingly, we are hearing more and more press regarding the risks and complications associated with VBAC. Yet the risks reported in a large study 20 years ago are the same as what is being reported more recently. In addition, hospitals are more and more commonly requiring that patients fill out a special consent form that is designed to confirm that the patient has made an informed decision. Apparently as a result of this consent form, we have seen a decline in women attempting the VBAC. This is unfortunate as I firmly believe that there are many excellent VBAC candidates who are led to believe that cesarean section carries with it little to no risks (when in fact there are risks involved in any route of delivery).

So what are the risks of VBAC? The main risk quoted by articles and friends and family members, and the risk that usually steers women away from the VBAC is the risk of **uterine rupture.** During labor (actually it can even happen prior to labor or even after a vaginal delivery has been accomplished, but more commonly it happens during labor), the line of uterine incision from a prior cesarean section can separate to varying degrees. **If it separates minimally, usually there is no consequence. If it separates completely, maternal hemorrhage may occur, and the fetus may be in severe distress and require immediate delivery. If interventional procedures (cesarean section) are not readily available, the baby may die or be born with severe physical and mental handicaps. Additionally, if the bleeding that occurs is uncontrollable, hysterectomy may be required. That is the worst-case scenario in a nutshell.** So the question remains, "Who in their right mind would want to attempt something that carries with it such horrible risks?" The answer is tricky, and it depends on the comfort level of the individual. **How often does uterine rupture occur in women who attempt the VBAC?? Not 20%, not 10%, not 5%, not even 1%. Uterine rupture occurs in 0.8% of women who attempt the delivery.** Of these, only a fraction require hysterectomy or have the complications listed above. In my lifetime, I've had to operate emergently to rescue babies that have passed through ruptured uteri into the abdominal cavity. I've had to perform hysterectomies to save women's lives due to a ruptured uterus. **I must say, however, that I've performed more hysterectomies in my career in women who delivered vaginally having**

never had a cesarean section or during elective cesarean sections for uncontrollable hemorrhage than I have for complications of VBAC.

The bottom line is that there is risk to mom and baby regardless of the route of delivery. Thankfully, the risks are small, and unfortunate occurrences are rare.

Nevertheless, I am comfortable with the prospect of VBAC, and last year attended more VBAC deliveries than any other staff physician at John Muir. I carefully selected women I thought would make good VBAC candidates, and didn't "push the ticket." As a result, there was 100% success in VBAC attempts. That is, all of the women who attempted a VBAC delivery did so with no adverse events to mom or baby. **I attribute that to God's grace and good patient selection.** My overall cesarean section rate is low, and I don't feel a need to make it lower by talking women into VBAC deliveries.

If you have had a cesarean section and would like to attempt a VBAC delivery, let's talk about it. I always like to **wait until 36 weeks before having serious talks about the delivery route.** To do so before that time is usually pointless, as so many things can occur that would make the discussion all for naught. **At 36 weeks, I can usually judge the odds of success versus failure.** If you are a good candidate and want to give it a try, I'm behind you 100%. Oftentimes I would consider an **induced labor at 39 weeks if the cervix is "ripe."** Medical studies don't advocate "chemical cervical ripening agents" which are sometimes used to soften the cervix prior to the use of Pitocin. I agree with these studies and do not use these agents. I do cautiously use Pitocin, an agent nearly identical to the body's own hormone Oxytocin, which is produced in the brain and brings on contractions. **I also advocate using an intrauterine pressure catheter, which allows us to assess exactly how strong contractions are, and is an instrument which may indicate whether or not a uterine rupture may be in progress.** Additionally, I love epidurals, which allow a woman to relax during all of the normal movements of the fetus through the birth canal. **I believe this regimen has allowed for the large number of successful VBACs that I've been a part of.**

The other aspect that offers significant reassurance is the facility at John Muir Medical Center. The fact that John Muir offers the presence of an "IN-HOUSE" obstetrician, anesthesiologist, and pediatrician, available from within the hospital nearly instantly 24 hours a day makes me feel more comfortable. Should the need arise in that rare circumstance, I know I have the appropriate personnel available to help me take care of you and your baby.

If you are interested in attempting VBAC, please ask me to go over hospital consent forms with you prior to the onset of labor. The forms basically include all of the information in this section but are required by the hospital.

Twins

Twin pregnancies are seen now with ever-increasing frequency, largely a result of successful in-vitro fertilization. Even so, “spontaneous twins” are still seen and are always fun for me to diagnose. The faces of shocked disbelief on the faces of couples often nervous about ONE addition to the family, let alone TWO...

After the realization of anticipated exponential growth of the family has sunk in, we are faced with the realities of the next eight months of pregnancy. So here goes...

The *thought* of having twins is considerably “cuter” than the *reality*. We treat twin pregnancies differently than “singleton,” simply because they may represent a more *risky venture*. As a result, we adopt a different approach in the management of twin pregnancies.

Regarding the frequency of visits, **expect to see us more frequently**. Additionally, you will be having **ultrasounds on a monthly basis** until delivery, to ensure adequate growth of *both* babies. Our goal would be to **stagger the visits** between us and your ultrasound visits with Diablo Valley Perinatal Associates. So beginning at 20 weeks, when you’ll have your first detailed ultrasound, you’ll see the perinatologists, then 2 weeks later you’ll see us, then 2 weeks later you’ll see the perinatologists, etc. **Later, you’ll see us every 2 weeks or every week, depending on how things are going with you and the babies.**

We would encourage you to attend classes taught by John Muir Medical Center’s Women’s Health Center (call them at 925-947-3331) regarding multiple pregnancies. These are excellent classes and are a time for you to learn a great deal about twins, as well as share with other women who are in the same situation. Because some women with twins may need to be placed on bedrest early, we would encourage taking the classes around 20–24 weeks, so be sure to register early!

So other than the frequency of visits and need for multiple ultrasounds, **what are the other factors of the prenatal care that are different?**

If you are a type A person (often the case with people having twins), I would encourage you to **change your way of thinking**. The course of pregnancy with twins can be **very unpredictable**, and it is best to allow a great deal of **flexibility** into your schedule. Let me say this again so you and your husband can be clear on this most important principle: **THE COURSE OF PREGNANCY WITH TWINS CAN BE VERY UNPREDICTABLE, AND IT IS BEST TO ALLOW A GREAT DEAL OF FLEXIBILITY INTO YOUR SCHEDULE.** Many women ignore this advice and think that complications are likely to happen to “other women” and are quite shocked when they themselves are placed on bedrest for weeks at a time. **I have found that women who alter their lifestyle to be more “low stress” early in pregnancy tend to go for a much longer time in their pregnancy problem free.**

Regarding **activity and exercise** early in pregnancy, expect to feel normal and for things to go relatively smoothly. For the most part, **women can exercise at a near normal pace until 24 to 26 weeks.** After 26 weeks, you may notice things changing. You may feel fatigue sooner than you expect, and you may feel winded easily. These are normal symptoms in a twin pregnancy. Since twins may make you more uncomfortable than usual during pregnancy, **resting** for periods during the day will help give you energy. **Avoid standing for long periods** of time and lifting

heavy objects. Your back will be much more vulnerable to injury compared to if you were carrying just one baby. **Toning exercises will be fine as long as you do not strain too much. The best exercises with twins are swimming (the best exercise), walking, and riding a stationary bike.**

Regarding work, plan on being able to carry on normally until 26 weeks. After that, we'll be looking closely at factors that may preclude your continuing in your usual fashion. Ask your employer well in advance about alterations in your schedule, and whether telecommuting is possible. **Travel by both car and plane should be fine up to 26 weeks** as long as you have not had any problems up to this time.

So let's review the most common problems with twin pregnancies that we need to treat:

1. **Preterm labor** is one of the most common complications we see with a twin pregnancy. This can result in preterm birth, and in fact about **half of all twins are born pre-term**. This oftentimes results in prolonged hospital stays in a neonatal nursery. If we discover that you may be entering into preterm labor, we will markedly reduce your activities and even consider hospitalization until delivery. **The use of medications to stop contractions at some point during the pregnancy is almost universal.** Terbutaline or Nifedipine are the medications we use most commonly. They work well but may have some side effects. Most women, however, get used to them and are able to tolerate the medication without any problem. To help diagnose preterm contractions or preterm labor that needs to be treated, **we may check your cervix, send you to Labor and Delivery at John Muir Medical Center to monitor activity of your uterus, or we may perform a vaginal swab to test for the presence of Fetal Fibronectin.** This new test can predict the likelihood of your delivering early with great accuracy. If the test returns **negative**, then there is a **99% chance that you will not deliver in the next two weeks.** If it returns positive, there is a 16% chance that you will deliver in the next week or two. Said another way, if the test returns **positive, there is an 84% chance that you will not deliver in the next week or two.** If your cervix is dilated, or if you are having frequent strong contractions, or if you test positive for the fetal fibronectin test, **WE WILL BE VERY AGGRESSIVE TO GET YOUR UTERINE ACTIVITY TO STOP.** This may include more medication, conversion to markedly reduced activity or complete bedrest, or hospitalization.
2. Another risk factor with twin pregnancies is **premature rupture of membranes.** This is where the membranes that hold the amniotic fluid in the uterus rupture early in the pregnancy prior to the start of labor. Sometimes the membranes may rupture in a very small area, resulting in a small leak. Regardless, this is called premature rupture of membranes, and moms who are in this situation are at high risk for **preterm labor, preterm delivery, and infection.** With premature rupture of membranes prior to the onset of labor, mothers are hospitalized and treated with antibiotic therapy, steroids when necessary to help speed the lung maturation process within the babies, and possibly medications to prevent the onset of labor. Each situation is different, although we are **often able to continue the pregnancy for long periods of time, allowing the babies to grow, substantially increasing their odds for survival and good health.**
3. **High blood pressure** that occurs for the first time in pregnancy is called pregnancy-induced hypertension. Women with twins are at higher risk for developing hypertension

during pregnancy. Therefore, it is important that blood pressure be controlled during the pregnancy. The way we can do so is oftentimes simple, and strict **bedrest** may be sufficient. This would obviously require a woman to stop working for the remainder of the pregnancy. Warning signs of pregnancy-induced hypertension may be elevated blood pressure AND severe or constant headaches, very sudden swelling especially in the face, blurred vision, pain in the right upper part of the abdomen, or sudden weight gain of more than 1 pound a day.

4. Twins are more likely to experience **growth problems**. Intrauterine growth restriction (IUGR) is a term for slow growth of babies during pregnancy. This is why we utilize ultrasound more frequently with twin pregnancies. When we identify these problems early, **bedrest** is usually recommended, and the babies are more closely monitored and may need to be delivered early. Sometimes twins grow at different rates and may become “discordant” if one is much smaller than the other. This may be due to one twin getting more blood and having more amniotic fluid than the other, poor functioning of the placenta, or birth defects. The smaller baby is more likely to have problems during pregnancy and after birth. Early delivery may be needed if either baby shows signs of having problems before term. Should there be any evidence of discordance, then fetal surveillance with twice-weekly monitoring will be required. This is done at John Muir Medical Center. We will assist you in arrangements should the need arise.

Delivery of twins may require cesarean birth; however, **most are delivered vaginally**. The only requirement I have to attempt a vaginal birth is that the first twin be head down in the birth canal. If the second twin is head down, it makes things very straightforward. If the second baby is in a breech position, it may be safely delivered by breech extraction shortly after delivery of the first twin. However, if the first baby is in the breech position in the birth canal, then cesarean section is required. Bummer. But, let’s face it...the most important thing is healthy mom and healthy babies...

Preterm Labor

Determining the difference between “preterm (also called premature) labor” and “preterm contractions” is often very challenging, both for the pregnant woman and for the obstetrician. **Preterm labor can be loosely defined as contractions prior to 36 completed weeks that are regular and of sufficient strength to cause a change in the cervix.** Preterm labor can and sometimes does lead to preterm birth. Preterm contractions may be described as painless to painful. They don't, however, produce a change in the cervix. In this section, we won't try to determine what is real labor at term and what is not. We'll be concerned with what happens prior to 36 completed weeks.

It is entirely normal to experience uterine contractions periodically during your pregnancy. Expect to have 15 to 20 on a daily basis. If you bend over then stand up straight, or pick something up, or roll over in bed and stand up, or exercise, or move too quickly, you may experience one or more contractions subsequently. **They should go away soon after you stop whatever activity precipitated them.** That is what makes the difference between something we should be concerned about and a physiologic event that is to be expected. The bottom line is that the *contractions should not be persistent.*

If the contractions are persistent **AND** increasing in intensity **AND** increasing in duration, or if you are unsure but are concerned about them, or if you have suddenly noticed a clear or blood tinged mucous-like vaginal discharge, *please call us so we can sort it out together.* **Before you call, however, try resting quietly for an hour and drink lots of fluids to see if that is enough to stop the contractions.** If you call us and it seems like you may be having preterm or premature labor as opposed to benign preterm contractions, **we may ask that you come into the office or even go directly to labor and delivery at John Muir Medical Center for further evaluation.**

FETAL FIBRONECTIN

This test was recently developed and has helped us differentiate between women whose contractions are worrisome versus those who may not warrant aggressive therapy. A vaginal swab can be performed that detects the presence of fibronectin, a protein released when the placental membranes are disturbed by subtle changes in the cervix secondary to uterine activity. **If the fetal fibronectin is negative, that's good.** It means that there is a greater than 95% chance that a woman will not deliver in the following 2 weeks (the test only predicts for a 2-week time frame). If there is still concern at the end of a 2-week period, the test may be repeated. **If, however, the test returns positive, the risk of delivery in the very near future is approximately 16%.** Positive results allow us to formulate a more aggressive plan to manage the contractions and thus prevent premature delivery.

If the test is negative, we can be reasonably assured that you will not deliver, and so we may follow a slightly more conservative approach to managing your contractions. **The test is invalid,** and cannot be performed, if you have had a **cervical exam in the last 24 hours,** or if you have had **intercourse in the last 24 hours,** or if you are **bleeding** at all. Otherwise, we can perform this test and have **results in a matter of several hours.**

We have been using this test more and more frequently in practice, and have found it to be very helpful. We do use it in the scope of the whole picture. **The fetal fibronectin test represents but one piece in the contraction puzzle.** So even if the results are negative, sometimes we treat the contractions more aggressively anyway.

If you have been diagnosed with preterm labor, keep in mind that we are largely successful with helping women make it to term and deliver “term” babies. **To improve your chances of delivering a term infant, we ask for your cooperation.** Things we may recommend if we are concerned that you may deliver early include:

1. **A modified work schedule or stopping work altogether**
2. **Reduced activity (Exercise cessation) or even bedrest at home**
3. **An oral medication, Terbutaline or Nifedipine, which serves to relax the uterus (see below for instructions)**
4. **More frequent office visits to monitor any change in your cervix**
5. **Prolonged hospitalization with stronger tocolytic (contraction-stopping) medications such as magnesium sulfate (yuk!)**

A key principle regarding preterm labor is that rest seems to be the best medicine. This is usually difficult to accomplish in today’s hectic environment. Most women don’t have time for the inconvenience of preterm labor. Having to arrange care for older siblings makes preterm labor even more challenging. Still, **preterm labor controlled is much better for everyone involved than preterm birth...**

If we find rest is unsuccessful and you are in need of medication to stop the contractions, we may prescribe Terbutaline. Its side effects are roughly the same as drinking too many espresso coffees: **increased heart rate and jitteriness.** We usually start with a 5mg tablet **every 4 hours or every 3 hours if needed.** At the end of the 3- or 4-hour mark, check your pulse. **If your heart rate is greater than 120 beats per minute, wait an extra 30 minutes and recheck.** If it is less, go ahead and take another dose. **Alternatively, we may prescribe Nifedipine.** This has relatively few side effects, but they may include dizziness. We start with a 10mg tablet every 6 hours but may increase to 20mg every 6 hours. The goal is to reduce your contraction frequency to less than 4 per hour. Sometimes you only need to take the medication while awake, whereas other times you need to take it around the clock. We’ll let you know how to take it and for how long.

If you are concerned that what you are experiencing is in fact preterm labor and not just preterm contractions, please let us know and we’ll help to sort it out as best we can.

Home On Bedrest

If you are reading this section you are undoubtedly thinking one of two things: I hope with all that I am that I never have to do this, or I can't believe they're recommending this for me...I have so many important things to do!

We understand fully how much a recommendation of bedrest will interfere with your life. We recommend it only when we think that you and your unborn baby will derive significant benefit from doing so. If we didn't think that bedrest was important for you in your particular situation, then we wouldn't even consider making the recommendation. If I sound redundant, know that we want to let you know that we understand, but must still make appropriate medical recommendations for the benefit of you and your baby.

Bedrest is recommended for some of the following reasons: Preterm labor, premature contractions when there has been little change in the cervix, twins with lots of uterine irritability, hypertension, and placenta previa with recent or recurrent bleeding. Other reasons are more obscure where the benefit is less defined.

Once we recommend bedrest, most patients begin what I call "Negotiation for Freedom." This includes such phrases as "Can I do this? What about that?" and "If I'm not allowed to cook dinner, what about lunch" or "But what about my 18 month old? Who will take him to daycare??" and "We don't have family or friends close by, and my husband works (too much)" or "Does this mean I can't work out 6 days a week for my usual three hours??" and "There's no way I can go without driving to Starbucks at least once (twice) a day!"

So you understand what we mean by bedrest, I've tried to stratify the term into two forms: Complete (strict) Bedrest and Modified Bedrest. In an effort to cut down on bartering time, we've come up with a basic schedule for both complete and modified bedrest.

Strict Bedrest	Modified Bedrest
7:00 Wake up, Bathroom Breakfast (Get from Kitchen, eat in bed)	7:00 Wake up, Bathroom, Shower Breakfast (Fix and eat in the Kitchen)
7:15 Back to Bed	9:00 Back to Bed
9:30 Shower (if you want), Bathroom Snack from Kitchen, eat in bed	11:00 Pick up clothes/ <i>light</i> cleaning (No vacuuming, scrubbing, mopping, etc.)
9:45 Back to Bed	12:00 Lunch (Fix and eat in the Kitchen)
12:00 Lunch (Remember...Eat in Bed!)	12:45 Back to Bed
12:15 Back to Bed	2:30 Bathroom, Snack
2:30 Bathroom, Snack	2:45 Back to Bed
2:45 Back to Bed	5:30 Free Time to Tinker around the House (Remember, no lifting heavy things at all)
6:00 Dinner, Bathroom	6:00 Dinner at the Dining Table, Bathroom
6:30 Back to Bed	6:45 Back to Bed
7:30 Snack Kiss the kids goodnight, etc	8:45 Free time with the Family Mellow, Mellow, Mellow...
7:45 Back to Bed	10:00 Bathroom, Snack, Go to Bed for the night
10:00 Bathroom, Snack, Go to Bed for the night	

Breech presentation and what to do about it

As you approach the end of your pregnancy, we will be interested in confirming the position of your baby. This can be done by digital exam when we begin checking your cervix at 36 weeks, or by ultrasound if we cannot determine presentation by exam. As it turns out, there is about a 4-6% chance your baby may be in an atypical position at term. For whatever reason, babies prefer the head down or “vertex” position. Although I do breech vaginal deliveries in women who have delivered vaginally previously and are deemed to be excellent candidates, I typically offer the opportunity to turn the baby into a vertex position by manually manipulating the baby through the abdominal wall. This procedure is called “External Cephalic Version”. This procedure has been documented historically 2000 years ago but has only become more popular in the last 30 years. It is a safe procedure when performed in the hospital setting with a complication rate of 1% (usually when undue force is applied causing rupture of membranes or other problems). Success rates of 54-83% have been reported in the medical literature, and my personal success rates are about 80%. The reason my rates are high is that I individualize and only attempt ECV on women who I deem appropriate candidates. The goal in turning the baby into a vertex position is to increase the chances of a vaginal delivery when labor ensues.

Good candidates are those women who have been pregnant and delivered before, or any woman with adequate amniotic fluid, and an active baby not wedged into the pelvis. Things that make the procedure less successful is delayed diagnosis (it happens...), obesity, having the fetal breech deep in the pelvis so that it cannot be displaced, or the fetal head at the top of the uterus sort of buried in the placenta like a pillow.

If you are diagnosed with a baby in the breech position at 36 weeks (keep in mind we don't care if the baby is breech before then, because regardless of the position at 35 weeks or anytime before that, the chances of the baby being breech at 36 weeks is still 4-6%. They move around a lot in their big swimming pool.) first and foremost, don't panic, and don't look for horror stories on the Internet! You will find them, but Internet stories don't apply to you. We will discuss the option of ECV with you. If you decline, then we will wait until 39 weeks and if the baby is still breech, we will do a cesarean unless you are a rock solid candidate for breech vaginal delivery. If you are a good candidate for an external cephalic version, we will schedule it to be done ASAP. Waiting decreases the chance of success.

We will have you report to Labor & Delivery at the appointed time. After monitoring the baby, we will give you a shot of Terbutaline, a medication that relaxes the uterus (and makes you feel like you've just downed a triple shot espresso. Once the uterus is relaxed, we will lay you completely flat and put ultrasound gel on your belly and I will gently but very firmly try to manipulate your baby to roll forward (sometimes backward) to obtain a vertex position. It sounds brutal but most women who are able to relax tolerate the event very well. Usually, the attempt takes no more than a minute, although rarely can take up to 3-4 minutes. After the procedure, either with or without success, we will monitor your baby for 45 minutes to an hour, and let you go home to enjoy your usual activities. We will then follow you up at your next scheduled appointment, at which time we will verify that your baby has stayed in the correct position. I can count on one hand how many women's babies in my career have flipped back to breech requiring a repeat procedure.

If it doesn't work and you end up requiring a cesarean section, don't worry! You will still end up with a positive birth experience and life will still be good! You have no control over this one...

Genetic Testing

One of the most basic concerns a woman will have during her pregnancy is regarding the health and “normalcy” of her baby. Although no single test during pregnancy will reassure a mother more than “counting fingers and toes” after delivery, we now have the ability to identify pregnancies at risk for genetic and structural abnormalities.

This part used to be so easy...just wait until the end to see what you get.

Now, however, there are a whole host of tests available for the expectant parent. The difficulty lies in deciding which to do based upon risk factors and one’s “need to know.” There is no right or wrong choice here. **Unfortunately, WE are able to offer the tests, but YOU AND YOUR HUSBAND must choose which is best for you.** Keep in mind, though, that we will respect any informed decision you make regarding which test you decide to do (or not do...).

Since the State of California entered once again into this issue of genetic testing, options for YOU, its citizen, have become yet more difficult to fully explain. I am tempted to refer everyone, including patients with the fewest risk factors, for an hour-long consultation with a genetic counselor to better understand what tests are available to determine your individual risk of having a baby with a chromosomal abnormality.

In this section, I will mention the usual tests that are offered/performed for screening. If in fact you do have more in-depth questions about these tests or other novel screening tests, I would be happy to refer you a genetic counselor.

The State of California offers several “levels” of testing:

- 1) Quad Marker screening. This includes a blood test drawn between 15–20 weeks (second-trimester test also formerly known as the Expanded AFP program test), or
- 2) Serum Integrated Screening. This combines first-trimester blood results (drawn between 10 weeks and 13 weeks 6 days) with second-trimester blood-test results, or
- 3) **Full Integrated Screening. Combines first-trimester blood test results and Nuchal Translucency results (see below) with second-trimester blood-test results (Expanded AFP program test).**

Patients will get a preliminary risk assessment for chromosomal abnormalities in the first trimester that will be revised when the second trimester blood test results are available.

ALL PATIENTS ARE OFFERED THE FULL INTEGRATED SCREENING TEST through our office. Following is the process for the full integrated screening test:

WE WILL GIVE YOU A REFERRAL TO HAVE THE FOLLOWING TEST (next page) AT YOUR FIRST VISIT. CALL AS INSTRUCTED TO SET UP AN APPOINTMENT AT DIABLO VALLEY PERINATAL ASSOCIATES (LOCATED DOWNSTAIRS FROM OUR OFFICE) TO HAVE THIS DONE IF YOU ARE INTERESTED IN GENETIC SCREENING TESTS.

The First Trimester Prenatal Screening Test

also known as

“Nuchal Translucency” or “NT Test”

(Part 1 of the State’s Full Integrated Screening)

The “NT test” (we use this abbreviated name most commonly) is available for mothers between 11 and 14 weeks of pregnancy. This genetic screening test will help determine if your baby has an *increased risk* of Down Syndrome (also known as Trisomy 21) or Trisomy 18 (which causes multiple birth defects, severe mental retardation and is uniformly fatal at varying ages).

The test consists of two parts:

- a) **An ultrasound exam performed between 11 and 14 weeks** to measure the amount of fluid accumulation behind the neck of the fetus (called the “nuchal translucency”).
- b) **Maternal blood tests.** These measure Beta-HCG and pregnancy-associated plasma protein-A (PAPP-A) and are drawn usually on the same day as the ultrasound, but may be drawn before.

This test *by itself* will detect approximately 75% of pregnancies affected with Trisomy 21 and about 69% of pregnancies affected with Trisomy 18.

The perinatology physicians at **Diablo Valley Perinatal Associates** provide the test and will be able to answer any questions you may have about the results. If you choose to do this test, **you will need to call the Perinatal office at 925-891-9033 to set up an appointment.** We will give you a referral slip for this at your first appointment.

What Does It Mean If The NT Test Is Normal?

If the test returns normal, your baby’s risk for Trisomy 21 or 18 is not greater than 1/100, a level set by the state where you would not qualify for more definitive testing by the State of California. **THIS IS GOOD!!!**

Allow about 10–14 days for results. Our medical assistants will call you as soon as we get them.

What Does It Mean If The NT Test Is Abnormal?

If the test returns abnormal, this does not mean that the fetus is necessarily abnormal. **IT IS A SCREENING TEST.** If it returns abnormal, **you will be offered further definitive testing** via chorionic villus sampling (CVS) or an Amniocentesis. **CVS can be done quickly and the results are available sooner than with amniocentesis.**

If the First trimester prenatal screening (NT) test is normal, then you have the option to *complete* the state’s FULL INTEGRATED SCREENING by having your blood drawn during the second trimester (the Expanded AFP test). Please see the next page for details.

The Expanded AFP Test

(Part 2 of the State's Full Integrated Screening)

The **Expanded AFP is a blood test** that is drawn between 15 and 20 weeks gestation (**16–17 weeks is the ideal time**). This test is most useful in identifying fetal open **neural tube defects** (such as spina bifida and anencephaly), **Down syndrome, Trisomy 18, and Smith-Lemli-Optiz syndrome (so rare, I've never seen it and will likely never see it in my entire career)**. Additionally, **abdominal wall defects** (abnormal openings in the abdomen which allow the liver or intestines to protrude through) may be identified through this test as well. This test **may be drawn in a laboratory close to your home**. There may be a **bill for roughly \$162** sent to you from the AFP Program that you should submit to your insurance company. Realistically, you may have to submit this bill several times (an unfortunate reality as insurance companies are not always prompt in paying bills in a timely manner).

As with the others, the expanded AFP is an elective genetic test, and *not all women decide to have it drawn*. The most common reason expressed by women who decline the test is “we wouldn't do anything if the baby was abnormal anyway so why get it done?” **We must emphasize that this test and the results may influence decision making beyond the immediate concern of whether or not to carry the pregnancy to term.**

The Real Question “TO DO OR NOT TO DO?” is influenced by whether or not the NT Test was performed, and how comfortable you feel with the results given. For example, you may feel more comfortable with just doing the First Trimester screening test if the result revealed a 1:8000 risk for Down syndrome than you may with a 1:800 risk.

When adding the Second Trimester blood test to the mix, the detection rate is increased over the First Trimester screening test alone: *For Trisomy 21 (Down syndrome), the detection rate increases from 75% (with just the First Trimester NT test alone) to 90% (First AND Second Trimester tests); for Trisomy 18, the detection rate increases from 69% to 81%.*

Let's say you only do the First Trimester Prenatal Screening/NT test but decide against doing the Second Trimester screening blood test: **Then you will receive your results, either normal or abnormal, from the office of Diablo Valley Perinatal Associates or from the Medical Assistants in our office (usually from our office).**

But what if you decide to do both? Then what happens is that you will receive preliminary results from the First Trimester Prenatal Screening/NT test done at **Diablo Valley Perinatal Associates** from Judy in **OUR** office; these **will then be revised after the results of the Second Trimester blood tests are available**. Those combined results will then be reported to you from Judy in **OUR** office. **This will constitute the final results of genetic screening tests! Whew!! Read this part again SLOWLY to make sure you understand.**

If you screen negative for these combined tests, the risk of certain birth defects and the aforementioned chromosomal abnormalities is low enough that the State AFP Program does not feel that any follow-up tests are necessary. For Down syndrome, the program's cutoff risk is 1:200. That means if a baby's risk is, for example, 1:210 for having Down syndrome, the result of your test is “negative.” If the baby's risk is, for example, 1:190, the test will return “positive.” **If it returns positive, we will call you to inform you and ask you to call the office of Diablo Valley Perinatal Associates for a follow-up appointment.** At this follow-up appointment, you would meet with a genetic counselor who will review with you particular risk factors and then you would undergo a thorough ultrasound with the perinatologist and possibly an amniocentesis.

When doing both tests, 95% of pregnant women screen negative (normal), but 5% will unfortunately screen positive.

If you screen positive, DON'T PANIC. The test is *designed* to identify as many abnormal babies as possible. To do this, there must be a certain percentage of “civilian casualties” (normal babies that screen as being abnormal, also known as a “**FALSE POSITIVE**”). **THESE FALSE POSITIVE RESULTS ARE VERY FRUSTRATING!!!** The most common reason for the “screen positive” is inaccurate dates (believe it or not, it happens very commonly), multiple pregnancies, or because substances measured in the blood varied more than usual for an unknown reason, having nothing to do with the fetus.

If the screen is positive, the State will reimburse for genetic counseling and an amniocentesis. During your meeting with a genetic counselor, questions will be answered and you can decide whether or not to pursue further testing. If you decide to proceed, an ultrasound will be performed to look for structural abnormalities. In addition, an amniocentesis will be performed to determine the chromosomal makeup of your baby (i.e., normal or abnormal chromosomes). Keep in mind that there is less than a 1-in-1000 chance of miscarriage related to the amniocentesis procedure.

For the more MATURE Pregnant Patient...

If you are 35 years old or *will be* by the time your baby is due, you have different options.

The state of California will allow you to bypass all of the aforementioned screening tests and proceed directly to the **GOLD STANDARD** tests, Amniocentesis or Chorionic Villus Sampling (CVS). If you wish to have one of these tests, please call the office of our Perinatologists at **Diablo Valley Perinatal Associates** for an appointment. At this visit, a genetic counselor will review your particular family and personal history and explain your choices and answer any questions you may have. Your choices will be to proceed directly with **chorionic villus sampling** at 10–14 weeks (risk of miscarriage less than 1:350) or amniocentesis – **standard and most commonly done** at 15–20 weeks (risk of miscarriage less than 1:1000).

The **Chorionic Villus Sampling (CVS)** procedure involves the removal (either through your vagina and cervix or through the abdomen) of placental cells that contain the same chromosomal makeup as your baby. **RESULTS OF THIS TEST COME FROM DIABLO VALLEY PERINATAL ASSOCIATES.**

The **amniocentesis** is a procedure that uses the ultrasound to guide a needle into the uterus to withdraw amniotic fluid, which will be used to determine the chromosomal makeup of your baby. Complications with this technique are the rarest of the invasive tests, but can range from cramping and bleeding to leakage of amniotic fluid, infection, and subsequent miscarriage (again, risk is less than 1:1000). **RESULTS OF THIS TEST COME FROM DIABLO VALLEY PERINATAL ASSOCIATES.**

Alternatively, you may choose to have the Nuchal Translucency test and proceed with diagnostic tests only if the test is abnormal.

**IN SUMMARY, your choices for genetic testing include one of the following:
Keep in mind that everyone will have a 20-week ultrasound, except if one is done at the 16-18 week amnio...**

1. No genetic testing, AND a standard/thorough 20-week ultrasound
(OR)
2. First Trimester Prenatal Screening (NT) test (cost covered by insurance) WITHOUT the AFP test (Second Trimester blood test), AND a standard/thorough 20-week ultrasound
(OR)
3. **First Trimester Prenatal Screening (NT) test (cost covered by insurance) AND the AFP test, AND a standard/thorough 20-week ultrasound. This is the California State's recommended screening option, called the Full Integrated Screening.**
(OR)
4. The Expanded AFP test (cost by the state of California) AND a standard/thorough 20-week ultrasound (usually done if the NT test is missed)
(OR)
5. **Genetic Counseling AND Amniocentesis or Chorionic Villus Sampling is available and offered for women 35 years or older by the time they will deliver. We encourage all women in this category to have genetic counseling, even if they intend to pass on the invasive testing and opt instead to have any of the other tests listed above...**

******Women in this group may also elect to have the First Trimester Prenatal Screening (NT) test, because it is done so early. If the result is abnormal, then they can proceed directly to the CVS test for early definitive diagnosis. If it is normal, *and they still want an amniocentesis* because of its accuracy and relative safety, they may have it done at the usual time (or they may choose to do no further testing). We think that this approach makes the most sense for women who will be 35 at the time of delivery.******

**Here's an idea of the risks based on age
that we're talking about:**

Mother's Age	Risk of Down Syndrome	Risk of any Chromosomal Disorder
20	1:1177	1:526
25	1:1081	1:426
30	1:700	1:385
31	1:613	1:313
32	1:526	1:252
33	1:442	1:216
34	1:365	1:172
35	1:296	1:134

Mother's Age	Risk of Down Syndrome	Risk of any Chromosomal Disorder
36	1:236	1:104
37	1:186	1:82
38	1:146	1:64
39	1:112	1:50
40	1:86	1:39
41	1:65	1:30
42	1:50	1:24
43	1:38	1:18

Cystic Fibrosis Testing

Cystic Fibrosis is a lifelong illness that causes digestive and respiratory problems. It is usually diagnosed in the first few years of life. Some people with cystic fibrosis have more mild symptoms and others have severe symptoms. Although this disorder **does not cause problems with intelligence or with physical appearance**, the health needs are absolutely significant. Taking medicine daily can usually treat the digestive problems. To treat lung problems, most children with CF need to have physical therapy for about a half hour every day to help clear mucus from the lungs. Lung infections are very common, and progressively become more difficult to treat.

Many people with CF can attend school, have careers, and have fulfilling lives, but **unfortunately all will have shortened life spans.** Some die in childhood, and others may live to be in their 40s; very few live beyond.

We screen our pregnant patients routinely to see if their offspring would be at risk for developing CF. However, **it takes two** individuals who are “carriers” of a particular abnormal gene to form a child with the disorder. If one is a carrier and the other is not, then they will not have a child with CF. Even if both are carriers, however, there is only a 25% chance of the offspring having CF. **If you have been screened before, you never have to do it again. The results will never change.**

The big question is how frequently individuals are carriers. The answer *depends on their ethnic background.*

- For **European Caucasians and Ashkenazi Jews**, the frequency of being a carrier is 1 in 29. The chance of both partners being carriers is 1 in 841.
- For **Hispanic Americans**, the frequency is 1 in 46; of both partners, 1 in 2,116.
- For **African Americans**, the frequency is 1 in 65; of both partners, 1 in 4,225.
- For **Asian Americans**, the frequency is 1 in 90; of both partners, 1 in 8,100.

If a relative of yours has CF, or is known to be a carrier of CF, your chance of being a carrier is greater based on your family history than your ethnic background.

If the tests show that you are a carrier, **the next step** would be to test your husband. If he tests negative, that’s the end of it. No chance of your baby having CF. If he tests positive, then that means there is a 25% chance that your baby would have Cystic Fibrosis (even if you have other children who do not have CF). If both you and your husband are carriers, you may want to speak with a genetic counselor and consider testing to see if your baby is one of the 25% who has CF. This testing can be accomplished by chorionic villus sampling at around the 11th week, or by amniocentesis at around the 16th week of pregnancy.

The cost of this testing is covered by some insurance companies and not by others. You may want to check with your insurance company prior to having the test done. As it is elective, and not “medically necessary,” **it is unlikely that our “pre-authorizing” the test will affect your insurance company’s policies of coverage.** We would be happy to obtain “pre-authorization” for you, but only after you call them and they tell you it **will** make a difference regarding coverage, **despite the fact that there is no medical necessity.**

For more questions regarding CF and the testing available, call Cystic Fibrosis Foundation: 1-800-FIGHT CF (1-800-344-4823)

Ashkenazi Jewish Carrier Screening Panel

This screening panel is recommended for **couples** that are of **full** Ashkenazi Jewish descent. The panel consists of **3 screening tests: Tay-Sachs disease, Cystic Fibrosis, and Canavan disease**. If both parents are carriers, the **risk of having an affected child is 25%** with each pregnancy.

The chance of being a carrier for **Tay-Sachs** if you are of Ashkenazi Jewish descent is about **1 in 27**. With no family history of this disease, the risk of having an affected child is 1 in 2900. Tay-Sachs disease is characterized by progressive mental retardation, blindness, paralysis, and eventual death in early childhood, usually by age 5. The detection rate from a *simple* Tay-Sachs screening test alone is about 94%. **The detection rate with the Ashkenazi Jewish Carrier Screening Panel is about 98%**, because it uses an enzyme analysis as well as the DNA analysis.

Cystic fibrosis (CF) is one of the most common inherited diseases. The carrier incidence among Caucasians in the U.S. is about **1 in 25-30**. With no family history of CF, the risk of having an affected child is about 1 in 2500. For more information on Cystic Fibrosis, please refer to the section in this handbook. **The detection rate for CF is 97% with this panel.**

The chance of being a carrier for **Canavan disease** if you are of full Ashkenazi Jewish descent is about **1 in 45**. With no family history of this disease, the risk of having an affected child is 1 in 5200. Canavan is a neurodegenerative disease caused by the deficiency of the enzyme aspartoacyclase. Affected children are apparently normal at birth but develop macrocephaly, developmental delay, hypertonia, and eventual death at several months of age. **The detection rate for Canavan disease is 98% with this panel.**

If you and your husband are of full Ashkenazi Jewish descent, and have never been tested to see if you carry the aforementioned traits (one normal gene and one abnormal gene) **ask us and we'll gladly provide you with a request to have blood drawn for the Ashkenazi Jewish Carrier Screening Panel**. You may first want to call your insurance company and ask them if the test is covered. Sometimes (most of the time...) **insurance companies may not cover "elective" screening blood tests**. There is little we can do to successfully convince the insurance companies to change their policies regarding coverage for elective screening tests. As a result, you may have to pay out of pocket for this one.

Sickle Cell Anemia

Sickle Cell Anemia is one of the most common inherited diseases among **African Americans**, with a **frequency of 1 in 600**. It can be found in people of other racial backgrounds, but much less commonly.

Although the hemoglobin (a red blood cell protein that helps to carry oxygen to tissues in the body) in persons with Sickle Cell Anemia functions properly most of the time, some conditions cause the protein to change the actual shape of the red blood cell. As a result, the **red blood cell takes on a sickled (crescent moon shaped) appearance**, so it can easily be caught up and lodged in small blood vessels. This causes severe pain, especially in joints, and is called “sickle crisis.” The body works to break these cells down and replace them with new ones, causing anemia.

Sickle cell anemia is a genetically inherited disease, and the genes that cause the illness may be passed from generation to generation. *To fully manifest the condition, a person needs to have two abnormal genes.* Most genes come in pairs. A carrier of Sickle Cell Anemia has one normal gene and one abnormal gene. A carrier does not manifest symptoms of the disease. A carrier is also said to have the “Sickle Cell Trait.” **If one “carrier” decides to have a child with another “carrier,” there is a one in four chance of having a child with true Sickle Cell Anemia.**

We offer a simple blood test, called **hemoglobin electrophoresis**, which can determine which people are carriers for sickle cell anemia. This is *more accurate* than other screening tests for the trait or disease.

If there is no one in a family with sickle cell anemia, then the chance of being a carrier is about 1 in 10 for African Americans, 1 in 190 for Hispanic Americans, and 1 in 650 for Caucasian Americans. The chance of being a carrier is increased when one has a blood relative with sickle cell anemia, regardless of the ethnic or racial background.

If you are African American and have never been tested to see if you carry the sickle cell trait (one normal gene and one abnormal gene) **ask us and we’ll gladly provide you with a lab slip to have blood drawn for the hemoglobin electrophoresis.** You may first want to call your insurance company and ask them if the test is covered. Sometimes (most of the time...) **insurance companies may not cover “elective” screening blood tests.** There is little we can do to successfully convince the insurance companies to change their policies regarding coverage for elective screening tests. As a result, you may have to pay out of pocket for this one.

Week Ten – Thirteen

“It’s time to listen”

Overview

This is the first opportunity during your pregnancy to actually hear the heartbeat of this miraculous process evolving inside of you. At this point, the embryo is approximately one inch in length and an incredible amount of differentiation has already occurred: skeletal frame, heart, eyes, and lungs have formed and are now growing and developing. You have known you are pregnant for only a few weeks and already so much has happened.

Today will be your first official “OB visit.” You will have a complete medical history and physical exam. Based on your history and physical, pregnancy risk factors will be discussed. Routine prenatal blood tests will be reviewed or ordered to be drawn at a lab of your choice if they were not done at your last visit. Importance of vitamin supplementation, diet and exercise will be reviewed. We will inform you of classes available to you during the early months of your pregnancy as well as childbirth preparation, breastfeeding, and newborn care classes that may be helpful later on. Today we will hear the heartbeat if we can and if we can’t we will perform an ultrasound to put your mind at ease. Hearing your baby’s heartbeat is a wonderful event and an important milestone for your pregnancy. **Please understand that we do not perform ultrasounds after the first trimester scan unless medically indicated. For any future ultrasounds, we will refer you to Diablo Valley Perinatal Associates. (Otherwise we would be doing up to 50 non-indicated time-consuming scans a day.)**

This appointment is a great time to begin asking questions and for us to cover a few important issues:

1. **Prenatal Vitamins:** How are you tolerating them?
2. **Symptoms:** Are the symptoms I feel normal and how long will they last?
3. **Genetic screening tests:** The First Trimester Prenatal Screening test (Nuchal Translucency) vs. the Expanded AFP vs. Amniocentesis. Which, if any, is right for me? When should they be done, and what are the risks? **(Be sure to read our section on Genetic Testing).** If you are or will be 35 when your baby is due, and would like to speak with a qualified genetic counselor to discuss the risks of fetal abnormalities based upon your individual history, ask us for a referral.
4. **20-week anatomic ultrasound:** This will be done at the office of **Diablo Valley Perinatal Associates. It should be scheduled ASAP if not done already** so that it will be done at 20 weeks. Most insurance companies will cover the cost associated with this exam.
5. Based on my medical history, is my pregnancy considered **low or high risk**?
6. What **classes** provide the simplest yet most helpful information about my pregnancy?
7. **Your questions:**
 - a).
 - b).
 - c).
 - d).

Week Fourteen – Seventeen

“Time for a different wardrobe”

Overview

By this time the vast majority of differentiation has occurred. At fourteen weeks, your baby is about 3 ½ inches long and weighs about two ounces. The arms, legs, fingers, and toes are fully formed, complete with fingerprints! The external and internal sex organs are apparent by this time. The stage has been set now for intensely rapid growth.

Hopefully the nausea, vomiting, headaches, and fatigue you may have been experiencing have begun to pass. If you still suffer from these problems, hang in there. They should pass in the next few weeks.

If you are sixteen weeks at this visit, then it’s time for the 2nd Trimester AFP blood test if you have decided to have it drawn (whether or not you did the NT test.)

Here are some important issues to review today:

1. **Laboratory tests:** Were the ones done at my first visit all normal? What is my blood type? Am I anemic?
2. **Genetic testing:** You have options, so please read our section on genetic testing and be prepared to ask questions. You will likely have received a lab requisition slip from Diablo Valley Perinatal Associates. If you have elected to proceed with the second part of the California State’s Full Integrated Screening test (AFP), then please have it drawn roughly between 16 and 18 weeks. This is the best time to have it drawn to avoid a higher false positive rate in case there are dating discrepancies. Results are available in 2 weeks and can be obtained by calling our office. If there is an abnormality, then know that we will contact you promptly. If you are or will be 35 when your baby is due, then you may have opted for the amniocentesis. The results take from 10 to 15 days, and you should receive results from the office that performed the test.
3. **Your Questions:**
 - a).
 - b).
 - c).
 - d).

Week Eighteen – Twenty One

“This is definitely real”

Overview

Can you believe you are about halfway through this event? The top of your uterus is about at your navel. At eighteen weeks, your baby is about seven inches long and weighs about four ounces. Eyebrows and eyelashes are present, and your little one may be sucking on a finger or toe.

Here are some important subjects to discuss this visit:

1. **The second part of the Full Integrated genetic screening test (AFP test):**
This was probably drawn last week but if you are less than 20 weeks and haven't had it drawn yet it's time. Again, this test is optional and is the second part of the State's Prenatal Screening Program. The results will be available in about 2 weeks. If it is abnormal, we will notify you as soon as we have the results. **If it seems like we keep asking about this, it's because we're obligated by the state of California to offer it to every eligible pregnant woman.** Keep in mind, it's optional and some women elect not to have it drawn.
2. **Weight gain:** Am I on target? Do I need to adjust what I'm eating or my activity level? What foods might contribute to excessive weight gain?
3. **Fetal Movement:** When will I feel my baby move?
4. **Have you registered** at the hospital yet? If not, you may do so online at www.jmmdhs.com/maternity/
5. **Your Questions:**
 - a).
 - b).
 - c).
 - d).

Week Twenty Two – Twenty Five

“I can feel my baby move”

Overview

Quickening is the term we use which refers to the perceived movement of the fetus inside the uterus. Most first-time mothers sense this later than those who have been down this path before. The movement you feel is “exercise” for your baby’s growing muscles. Initially, movement will be sporadic, so don’t be concerned if you feel it, then don’t for long periods of time. Over time, the movement will become more regular and frequent and reassuring. At this time, your baby weighs over half a pound and is ten to twelve inches long.

This visit is usually a quick one. **At this visit, Maria or Heather will give you a lab slip for your “Gestational Diabetes screening test.” This should be performed between 26–28 weeks.**

We will also give you a **prescription to get your Tdap vaccine** (for whooping cough – see my explanation in the Common Questions section regarding this important vaccine), and a **prescription for a breast pump**, in case your insurance plan covers this and it is something you would like to purchase.

Lastly, we will give you some **information about umbilical blood storage** to read up on and investigate. Umbilical cord blood storage is available and although it is not for everyone, you may find that you are interested in educating yourself further on the subject. In addition to the information that we will provide you, please consider going to the company website to peruse the information or even call the company representative for any questions that you may have. **We may be able to answer some basic questions for you, but for comprehensive information, we would ask that you call the company representatives.** It is an expensive prospect, and we want you to make an informed decision. **There will be only one opportunity to collect blood for storage, and we want to make sure you feel comfortable with the choice you have made.** For more details, see my section on this in the Common Questions part of this handbook!

Here are some important questions to discuss this visit:

1. Were any abnormalities noted on the **ultrasound** report?
2. What were the final results of my **Full Integrated Genetic Screening Test or Amniocentesis**? (You likely have already received these results, but in case you haven’t, please ask us.)
3. When do I need to choose a **Pediatrician**?
4. **Your Questions:**
 - a).
 - b).
 - c).
 - d).

Week Twenty Six – Twenty Nine

“Cruisin”

Overview

If all is well, you are on “autopilot” at this time. You are probably used to the pregnant look, and yet you haven’t reached that uncomfortable period you hear your friends talk about. Skin changes and leg cramps may be more noticeable though. Leg cramps usually come on at the miserable time of 2 o’clock in the morning. They are not related to calcium, potassium, or magnesium deficiency, so don’t even bother. Ask your partner for a massage instead. And don’t forget: never flex your calves and point your toes after midnight!

Your baby’s sleep cycles are regulated at this time, so don’t be surprised if you don’t feel movements for several hours periodically throughout the day. Calcium is being stored in your baby’s bones, causing them to begin hardening. Your baby weighs about 1 ½ pounds, now.

Here are some important issues to discuss this visit:

1. **If I’m Rh negative, when do I need to get my Rhogam shot?**
2. Don’t forget about the Tdap vaccine. Any time between 27 - 32 weeks! See page 21 for more details.
3. **Other tests:** During this time period, we’ll want you to have several standard tests. On this visit Maria or Heather will give you a lab slip (if you did not receive it on your last visit) to have a blood panel drawn that checks for **gestational diabetes, anemia, and abnormal antibodies** (if your blood type is Rh negative only). See the next page if you have been diagnosed with **Gestational Diabetes**.
4. **Your Questions:**
 - a).
 - b).
 - c).
 - d).

Week Thirty – Thirty One

“When is my due date again?”

Overview

Your baby is now about 2 ½ pounds. Kicks may change from jabs to rolls, as the baby takes up more space in your uterus. You may notice some swelling in your ankles, but this is common. You have probably started your prepared childbirth classes by now. You should be planning to interview **Pediatricians** very soon. When you know who it will be, please let us know.

Braxton-Hicks contractions may become more frequent. These are painless, irregular, and last 20 to 30 seconds. They are common at the end of a busy day, during exercise, or immediately following exercise. If they come every 10 minutes or closer, sit down and rest and drink some water. **Let us know if you have these type of contractions every 10 minutes or closer for about 2 hours or longer, as they can potentially cause your cervix to dilate prematurely. SO CALL US ANYTIME THIS HAPPENS...**

If you have recently been diagnosed with *Gestational Diabetes*, you may be nervous as to how this will impact your pregnancy. We will have referred you to the John Muir Diabetes Center, which does a superb job in education and management of pregnancy-associated Diabetes. While you are waiting for your appointment, please be comforted. **This common condition is usually very easy to manage and alterations in the course of prenatal care are uncommon.** With good blood glucose control, pregnancy outcomes are almost always excellent. Feel free to call and ask us if you have any concerns regarding a recent diagnosis of Gestational Diabetes.

Today’s visit is very easy. In addition to checking the heartbeat and growth, we’ll go over results of your diabetes screening test. If you haven’t heard the result yet, usually it means that it is normal. Also, we will keep reminding you about the Tdap vaccine...

Here are some important questions to discuss this visit:

1. **How frequently will I be seen** from now on?
2. What should I expect from **future visits**?
3. **How active can I be?** How late can I travel distances?
4. Be sure to tell us of any **unusual symptoms**.
5. **Your Questions:**
 - a).
 - b).
 - c).
 - d).

Week Thirty Two – Thirty Three

“Is there enough room in my body for this?”

Overview

Your baby’s eyes now open and close regularly. Hair on the head is filling out. The skin is still red and wrinkled. Your baby now weighs about 3 ½ pounds. Most women worry about early delivery, but the reality is that most babies born at this gestational age do very well in the nursery and have little risk of long-term physical or developmental problems. So relax...

Here are some important questions to discuss this visit:

1. **Premature contractions vs. Premature labor**
2. **Childbirth education classes** – How are they going?
3. **Did you get your Tdap vaccine yet?** See page 21 for details.
4. **Birth Plans:** Are they right for you? (**Don’t feel pressured to come up with an extravagant birth plan.** Keep in mind that we want the same things you want...simplicity and a memorable experience. We pretty much do all of the things as a routine that you may come up with on a birth plan).
5. **Your Pediatrician** – Who is it? If you haven’t picked one and need a recommendation, let us know...
6. **Your Questions**
 - a).
 - b).
 - c).
 - d).

Week Thirty Four – Thirty Five

“This is getting old”

Overview

At this point, your baby’s lungs are beginning to mature. Your baby may now be causing havoc in your lower pelvic region. The head grinding on your pubic bone and bladder is sure to cause you momentary distress. The only real change in your baby at this point is the size.

Here are some important questions to discuss this visit:

1. **Kick counts:** How, why, and when to do them.
2. Getting ready to start **disability** next visit at 36 weeks if you want. **The earliest time in an uncomplicated pregnancy that we can take you out of work on disability is the beginning of your 36th week.** You will need to obtain a disability form from your work if they have them or go to our website at www.stephenwellsmd.com then click “Office Functions” to get instructions for California State Disability Income. If your work needs something extra, i.e. a note, then tell us.
3. **Group B-streptococci vaginal culture:** We routinely screen every pregnant woman at **35 to 36 weeks to identify those who carry the bacteria called Group B-streptococci in the vagina.** This organism is a **normal** intestinal bacterium that is commonly present in the vagina, usually producing no symptoms. **IT IS NOT A SEXUALLY TRANSMITTED INFECTION. IF YOU HARBOR THIS BACTERIA IN YOUR VAGINA, IT IS COMPLETELY NORMAL.** On this visit, the culture will be obtained with a cotton swab from the vagina and the rectum, which often serves as a reservoir for Group B-streptococcus. **ASK US TO REVIEW YOUR RESULT WITH YOU** at your next visit. If your vaginal culture returns positive, **as it does in 30% of pregnant women, *don’t worry.* No treatment is necessary prior to the onset of labor, although we will treat you with an intravenous antibiotic *during your labor* to protect your baby.** We treat our patients who harbor the bacteria because studies have shown an association between neonatal pneumonia and/or meningitis and maternal vaginal “colonization” of Group B-streptococcus bacteria. The risk of serious illness without treatment is still very low, about 1–2%, but we feel more comfortable treating moms who **are** carriers to further reduce risk. Please see the section on Group B Streptococcus.
4. Any questions regarding your **birth classes?**
5. **Your Questions**
 - a).
 - b).
 - c).
 - d).

Week Thirty Six – Thirty Seven

“Home Stretch”

Overview

If you go into labor at this time, we will probably not stop you. You have now made it to the last leg of your journey. **We will check your cervix each visit** from now on. Changes we may report to you are the **dilation** (how many centimeters your cervix is open), **effacement** (how shortened or thinned out the cervix is), and **station** (how low in your pelvis the baby is). These changes are of some interest to us but unfortunately **they don't allow us to predict with any accuracy when your labor will begin.**

Here are some important questions to discuss this visit:

1. **Labor Precautions** – when to call us. See the next section for a preview of when to call.
2. **Kick counts**
3. **Genital Herpes:** If you have genital herpes and have frequent outbreaks, you have the option, at 36 weeks, to take pregnancy-safe prophylactic antiviral medication (Valtrex or Zovirax) until you deliver. These medications dramatically reduce the chance of an outbreak at the time you enter into labor. If you do have an outbreak when you enter labor, or even 7–10 days prior, it is recommended that you deliver by cesarean section, to reduce the chance of transmission of the virus to your baby. Please see the section on Herpes Virus.
4. **Review special concerns** that you should convey to the labor and delivery nurses when you go in, i.e., **Group B-streptococci status (be sure to ask us your status, whether positive or negative, for GBS)**, blood type, previous cesarean section, significant medical illnesses, etc. If you can't remember all of the important stuff, don't worry. There are copies of your prenatal records at the hospital by this time.
5. **What is the position of the baby? Is the head down?**
6. **Your Questions**
 - a).
 - b).
 - c).
 - d).

Weeks Thirty Seven – Forty (One)

“Any day now”

Overview

This is a time to review and make sure everything is in order. By this time you should have: Picked the pediatrician, registered at the hospital, arranged for child care if you have other small children, packed your hospital bags, and mapped out the route to the hospital (in case you haven't been there three or four times already...). EVERYTHING READY???. Okay. Now all you can do is hurry up and wait! Be encouraged by weekly changes in your cervical exam. Walk lots if there are no contraindications, i.e. toxemia, etc. If you are still pregnant at 40 ½ weeks, we'll start talking about inducing your labor at 41 weeks. Otherwise these term visits are relatively simple. Basically, we'll check your baby's heartbeat, measure your uterus, and check your cervix during these quick visits.

Here are some important instructions to clarify this visit:

1. Labor precautions – When to Call:

- a. **Contractions:** When they are **progressively increasing in frequency** over time so that they are occurring every 5 minutes (**every 10 minutes if you've been down this road before**) for an hour **AND AT THE SAME TIME** are **progressively becoming so intense** that you are not smiling anymore **AND AT THE SAME TIME** are **increasingly longer in duration** (about 45–60 seconds from 15–30 seconds). When *all three characteristics are present*, it's almost always a sure bet you're in labor...
- b. **Bleeding:** No need to call us if you've passed blood-streaked mucous, i.e., the “mucous plug.” We can't predict when you'll enter labor based on passage of the plug. (And please, please, please – don't put the mucous plug in a Ziploc baggie and bring it in to show us. We'll trust you that you've passed the plug ☺). **But if you are having bright red blood from the vagina, please call us immediately.**
- c. **Ruptured membranes:** If you feel a gush of fluid, or a continuous trickle of fluid, please call us immediately. If the fluid is **greenish or brown**, tell us so when you call.
- d. **Decreased fetal movement:** Perform “kick counts” several times daily if you notice a significant decrease in your baby's movement. If the criteria mentioned in my chapter on “kick counts” are not met, please call us immediately.

2. Labor precautions – Whom to call:

- a. **Call our office first: 925-935-5356.** If it's “after hours,” you will be connected to our answering service through a set of triage instructions. **When you hear the recording, press the number 1, wait, then the number 2, then when prompted leave your phone number, then wait for the operator to leave your message.** The on-call doctor will call you back, then may ask you to call L&D to let them know you will be coming in for an evaluation.
- b. **If you are unable to connect** with Dr. Wells, or the on-call doc in a reasonable amount of time (10–15 minutes), **call directly to Labor & Delivery (L&D) at John Muir Medical Center (925-947-5330)** and ask for advice, or **if you really can't wait and are worried, proceed directly to L&D and we'll work out the details when you get there!**

Birth Plan for Teresa and Stephen Wells

The following was presented **in jest** to my wife's Obstetrician, the night before her VBAC induction. Don't take this seriously at all. I include it here because every time I read it, I crack up, remembering the actual events of her labor...

We, Teresa and Steve Wells, are looking forward to a wonderful birth experience. We understand and have learned through our "Bradley Method" childbirth education classes that although occasionally there may be some minor complications such as shoulder dystocia, placental abruption, and uterine rupture, childbirth is almost always a very natural experience that usually doesn't even require the presence of an Obstetrician. Although we know that there are some hospital policies that need to be enforced, we would ask for the most natural form of childbirth possible, and that our wishes for a beautiful experience be respected. The following is a list of our preferences during the course of labor. We know that some of them may not be able to be performed for various reasons, but we ask that you try to aid us in completing each item on our checklist so that we may impress all of our "Bradley Method" colleagues:

1. Teresa would like to labor on a bed of garden-fresh scented pillows surrounding her, and to be able to sip herbal tea and listen to Enya.
2. Early during the course of labor, Teresa would prefer no artificial form of anesthesia. Instead, she would like a mixture of garlic paste and dill weed to be massaged onto her abdomen to minimize discomfort from her gentle little labor pains.
3. She does not desire the use of an I.V., and would rather replenish her fluid stores and maintain electrolyte homeostasis with Crystal Geyser mineral water served on ice.
4. She would like her Obstetrician to be at bedside holding her hand and offering mild words of encouragement the moment her cervix is dilated to 3 centimeters, and to remain at bedside until she has delivered and completed her bonding experience.
5. We prefer an unmonitored labor. If the fetus is in jeopardy, we believe it to be a natural, predestined event that should not be interfered with.
6. In the unlikely event that the labor pains become intense, she would like to internalize the feelings of pain and become introspective. If this technique is not effective, she would like to be allowed to use strong adult language. However, no mind-altering narcotic medications or leg-paralyzing epidural anesthesia should be suggested or encouraged, even if the pain literally kills her. Her goal is to undergo natural childbirth at any cost. Anything less will lead to deep-seated feelings of guilt and worthlessness.
7. When she is ready to deliver, she desires the "urge to push" technique, even if she is only at 6 centimeters. She would rather not have her interfering Obstetrician tell her when she should or shouldn't push.
8. Teresa would prefer no form of anesthesia that may dull her sense of excruciating, brain-racking pain as her beloved newborn rips her supple perineum nearly unrecognizable as she listens to Enya and sips her herbal tea. As an alternative, she would like 37.5°C warm compresses with rosebud scented mineral oil massaged into her perineum to uselessly reduce the severe trauma and multitude of lacerations that will undoubtedly occur when the head

passes through. Should the shoulders become entrapped, she would like all persons in attendance to urge little Katie through the birth canal with song, instead of using any unnatural barbaric maneuvers that the Obstetrician may have in mind.

9. Immediately after delivery, Teresa would like Katie on her breast. The umbilical cord should not be clamped or cut until it has completely dried up and fallen off little Katie. Should there be a little heavy hemorrhage, we would prefer to coax Katie to “suck a little harder” instead of the use of the evil Pitocin.

We understand that there may be some alteration in the above birth plan, but keep in mind that if we do something different, we may be the laughing stock of all our “Bradley Method” classmates.

Labor and Delivery

“Honey, it’s time”

You’re in labor and sure of it. There’s no doubt this time. So what’s going to happen next???

First, call us.

If you go into labor during office hours, you may speak with either of the midwives, the nurse practitioners, or me. If it is after hours, then call the office and our answering service will put you in touch with me or with one of the on-call docs. After hours, you will hear a triage phone message that should ALWAYS end in a conversation with a live person. When you call 925-935-5356 and hear the message, you should be able to press the number 1 then the number 2, and then be asked to punch in a 10-digit phone number (area code plus your number). Then wait and your call should be answered by an attendant who will then text or call the on-call physician. Your call-back from the on-call physician should be received in a reasonable amount of time (10–15 minutes, possibly longer if our hands are tied up in surgery, delivery, etc). Regardless, we can help put you at ease and direct you to the hospital. After we talk with you, we’ll ask you to call the hospital to notify them of your impending arrival. If you have any special concerns about your labor and delivery i.e., your birth plan, needing antibiotics for mitral valve prolapse or for a positive Group B streptococcal culture, etc., mention it to the nurses when you arrive. Your prenatal records are available on L&D, so the nurses will have them to review when you arrive.

Then go to the hospital.

If labor has commenced or if your membranes have ruptured, we would feel more comfortable having you at the hospital, being carefully monitored. Obviously the risks of staying home longer are remote, but there are *serious problems* that can be prevented or promptly treated if you are assessed early during the course of labor.

Upon arrival...

Ahhh, paperwork. Another reason to get to the hospital earlier, rather than later. Hospital policy requires your filling out consent-for-treatment forms, security forms, and any other forms the nurses may find laying around.

The “questionnaire.” Going over your life history with your attending labor nurse between contractions. What fun...

Plugging in the fetal monitors. They consist of two parts. One monitors the fetal heart rate pattern and the other the contraction pattern.

Getting settled. Realizing that you’re in for the duration and there’s no turning back. Remembering all of the items you forgot at home. At this point, try to relax and just go with the flow. Everything will fall into place. Besides, there is nothing you can do about “loose-ends” now anyway.

Who will deliver my baby?

This question has been asked since the first time you set foot in our office. For years I have told my patients that I usually deliver the vast majority of my patients. Many wished to have a 100% guarantee that I would be there on that special day. But most understood that I “had a life also...” and knew that I couldn’t give that 100% guarantee. Interestingly, when I asked patients

about their experiences having been delivered by my colleagues, the usual answer was “we had a great experience.” With that in mind, I have taken on Sonya and Amanda, two highly qualified Certified Nurse Midwives, to help with deliveries so that most all of our patients, if they choose, will have someone they know and trust present to deliver their baby. I have also queried patients who have been delivered by Sonya or Amanda, and comments I have heard validated my suspicion: Women love to be delivered by them, and the bonds that have made have led to these women coming back hoping to be delivered by them again! Please visit my website www.stephenwellsmd.com for testimonials that came from a survey I had sent out years ago.

Our on-call schedule will have frequent changes due to vacations and mid-week conflicts, but basically it will look like this: I am on-call with my 6-physician call group every sixth night and every sixth weekend, so am on for night-time call most Wednesdays, but on other random nights as well. I also deliver inductions and other laboring patients who will likely deliver by the evening on Mondays, Wednesdays, and Fridays. Tuesday I am in surgery and Thursday I am off altogether. Sonya works in the office every Monday and Thursday, and on these nights, plus every other weekend, she delivers. Amanda is in the office all day Tuesday and Friday. She delivers Tuesday day and night, and alternates Wednesdays and Fridays with me. VERY CONFUSING, I KNOW, BUT THIS ACTUALLY WORKS! In this way, you will either see Sonya, Amanda, or me. If you prefer not to have Sonya or Amanda attend your delivery or if your pregnancy is very complex, then you may have one of my other call-group obstetricians deliver you on the days that I am off and Sonya or Amanda is on call. This should be a relatively rare occurrence. I know this sounds confusing, but we have a schedule that is sent to Labor & Delivery each month, so WE know who is on at any given time. Again, we want you to be delivered by a familiar face. If you labor and ultimately need a cesarean section for delivery and I am NOT available to come in to deliver you, DON'T WORRY! Sonya and Amanda both have privileges to assist in your cesarean section with one of my colleagues. Continuity of care is important to me!

Regarding Labor

Our primary goal is for your labor and delivery to end with a healthy infant, healthy mom, and fond memories. In accomplishing this, we want to allow you to proceed in the way you have envisioned. It is our philosophy that your labor should progress with minimal intervention. We will only augment your labor if it is not progressing in a timely fashion. It is important for you to understand that labors prolonged more than normal lead to unnecessary exhaustion and profoundly increase the risk of infection and cesarean sections.

After we have assessed your baby by monitoring the heart rate for a short period of time, you may walk around in your room or in the hallways. Only if there is a medical reason, will we need to draw blood or start an I.V. If you need antibiotics during labor we can hook up your I.V. when receiving the medication, allowing you to move about freely. Showers are fine. You may rock in a rocking chair and use a birthing ball if you so desire.

“Natural Childbirth”

The decision to undertake labor and delivery without “pain medication” is a misnomer. During labor, your body actually produces chemicals called endorphins, which act like morphine to provide slight relief from pain associated with contractions. In addition, you can use breathing techniques to help maintain a sense of control during labor. At this time, you will want to follow the approach learned in your childbirth education classes.

We will not hinder you from going through labor without analgesia. However, if you ask for medication for pain relief we will give it to you. *Keep in mind that sometimes a patient's response to pain can hinder the progress of labor, and when pain is relieved, labor can speed along quickly.*

“Natural Childbirth...with a little help from the Anesthesiologist”

There is nothing unnatural about going through labor with an epidural. With an epidural, your course of labor will be shorter, more restful, and more enjoyable. You will be more rested in the end when you are looking forward to spending time with your newborn. Don't underestimate the value of being well rested as you face going home with a newborn that likes to eat every few hours.

Pain Control in a nutshell

In an effort to make your whole experience as pleasant as possible, various forms of pain relief are available. Intravenous narcotics and labor epidurals are the primary methods used today.

Intravenous narcotics are most commonly used to “take the edge off” labor pain. Advantages include easy administration, quick onset, and these medications do not inhibit your ability to move about. Disadvantages are that they tend to make you feel doped up and they don't take away the majority of the pain. They do cross the placenta but the effects on the baby are negligible. For patients who don't mind feeling like their head is in a fog, this is a great way to go.

Labor epidurals are the “gold standard” for pain relief during labor. They take away most if not all pain associated with labor and delivery. There are no effects on the fetus. Complications are extremely rare, and therefore it is very popular at most hospitals.

Some childbirth educators may have taught you that epidurals slow the course of labor. However after years of anecdotal experience, we believe that although an epidural may slow the frequency of contractions for a short period of time, in general they shorten the time until delivery. Epidurals are placed when the patient needs pain relief, not when the cervix is dilated to a certain number of centimeters.

Special Delivery

Our methods of delivery are all basically the same. We coach you, but we let you do all the work. If you have a birth plan, we will follow it as closely as possible. We won't intervene unless harm will come to you or your baby by waiting. Our rate of use with the vacuum is very low, and our C-section rates are very low (unless you have a very rigid birth plan). We won't do anything for our own convenience. We do not do routine episiotomies, but if we strongly recommend them, don't be discouraged. We're trying to save you from worse types of lacerations, including those that tear through the labia, clitoris, or urethra.

You may have as many people as you want in the room for the delivery, and feel free to take pictures, videotape, etc. This is your special time and we want you to enjoy the miracle. I would advise, however, that you give serious thought to who you wish to have in the delivery room with you WELL IN ADVANCE. Having done this for a while, I am continually amazed and slightly amused at family dynamics right at the time of delivery. Decisions are made right at the last possible moment and concerns are expressed so that no one's feelings are hurt. If anyone asked what generally works the best, I'd have to say that a husband helping his wife through labor and delivery makes for a fantastic experience. After all, the whole process began intimately with just the two, so why not the same for the end? Additionally, I'd say that family members and friends tend to congregate in one part of the room and "talk quietly with each other," which to a laboring woman has the same calming effect as a jackhammer. Nevertheless, if you've given it plenty of thought, and want multiple people in the room for the grand finale, it's okay by me.

The Aftermath

After delivery, you may rest, breastfeed, eat whatever you want, or just stare at your baby in utter amazement. Whatever you want to do is fine. You'll stay in the delivery room for about 1 hour and then the nurses will take you to the postpartum ward to rest. Our best advice is to get as much rest as possible. A remarkably short time passes until you'll be leaving the hospital and it's "24 hour child-care services."

Home From the Hospital

Activity:

When you first get home from the hospital, you will no doubt be tired and sore to a varying degree. For the first week or so, plan on lounging around the house getting used to a much different routine. Rest when you can and let those around you take care of details such as keeping the house clean and cooking. Walking around the house and going outside for short walks should be fine, but let your body guide how much you do. If you do something and it hurts, don't do it. Wait a little longer. You will progressively be able to do more and more with each passing day. Soon you will be able to carry on with your normal activities. You may shower and take tub baths as soon as you get home from the hospital (hold off on tub baths if you've had a cesarean section until two weeks have passed). Jacuzzis are fine, as well.

Visitors:

For the first several days, it is normal to have family and friends come by to see the newest addition to your family. Most will come by at their own convenience and with the best of intentions. **Husbands, heed my advice: *Protect your wife!!!*** If people come by to visit at staggered time intervals, your wife will get frustrated because of the exhausting task of entertaining visitors. Several days of this may lead to profound exhaustion, and difficulty caring for your newborn. **My advice is for the husbands to coordinate visiting hours for family and friends.** For example, if people call with an interest in coming by, ask them to come during a specified one-hour interval. That way, your wife knows she will get rest after that one-hour visit with multiple guests has passed. Trust me. **Your guests won't mind having guidance on stopping by at a time that is good for the new mother!**

Exercise:

You may be able to resume exercising as early as two weeks after delivery. Again, let your body guide how much you do. If you do something and it hurts, that is your body telling you you're doing too much too soon... Remember, you are kind of starting from scratch. Start slow and work yourself up over time. Keep yourself well hydrated at all times. Walking and swimming remain the best exercises (swim only after your bleeding has completely subsided), although you may jog, run, use the StairMaster, or lift weights at your own pace. Obviously, wait a while for bike riding...

If you've had a cesarean section, wait at least 4–5 weeks before beginning any vigorous exercises. Walking should be fine earlier than this time as long as it is not too uncomfortable.

Diet:

Eat healthy and try not to purposefully lose weight. Let it come off from exercise, not by decreasing caloric intake. Remember you need about 500 extra calories for the purposes of breastfeeding. Keep taking your prenatal vitamin. You shouldn't need to continue taking iron supplements unless you lost a lot of blood during delivery, but extra calcium is not a bad idea.

I've found that most women who come back for their 6-week postpartum visit weigh on average the same as they did when they were 20 weeks pregnant. This seems to be a good goal. Women who follow this trend usually weigh their pre-pregnant weight by three months following delivery. Again, it is usually exercise that allows women to return to their pre-pregnant weight. It is important for the baby not to reduce caloric intake in an effort to reach your goal weight.

Breastfeeding:

Breast milk will come in 2–4 days following delivery. Breastfeeding is nature’s best for your child, so we recommend you give it a try. For difficulty with the process of breastfeeding, you may call the Women’s Health Center in Walnut Creek (call 925-947-3331). There are lactation consultants available to speak with you who specialize in helping moms learn how to breastfeed successfully, and they are skilled in helping with most problems that you may have. You may have even met with some while recovering in the hospital. An initial consultation with the lactation consultants is free.

If you have problems with engorgement (very hard, tender breasts associated with fever, flu-like symptoms such as muscle aches and chills) we recommend hot showers, moist heat applied to the breasts followed by feeding, manual massage to express milk, or a breast pump to empty the breasts as much as possible. Call us if you experience these symptoms AND a red, painful area on a particular area of the breast. This may represent a condition called “mastitis” which usually warrants antibiotic therapy as soon as possible.

If you decide not to breastfeed or cannot for some reason, that’s okay. Even though society puts a ridiculous amount of pressure on women to breastfeed, many decide not to, or can’t because of certain conditions. Don’t feel bad and don’t feel like you’re not being a good mother. Remember 3 things:

1. Formula contains plenty to provide your newborn with adequate nutrition.
2. Breastfeeding has come in and out of “vogue” about every 10 years since the 1960s. Most of the women whose babies I deliver weren’t breastfed. Myself included. I think we turned out o.k....
3. The same women who so adamantly support breastfeeding with the mindset “It’s the best nutrition for my child – how could I even think about giving my child anything but the best?!” are likely the same women you’ll see cruising through Burger King with their kids for that OH-SO-Nutritious lunch (with a special toy, of course...).

So keep it in perspective. If you don’t breastfeed, your child will still grow up with the same chances of being a productive member of society as any other breastfed kid.

That being said, if you are not going to breastfeed, wear a sports bra plus a small bra on top of the sports bra every day, 24 hours a day (except in the shower...) until your breasts become soft again. Ice packs help with the 2-4 days of engorgement you’ll feel after your milk has come in. Take Motrin or Vicodin for the discomfort as you need.

Bleeding / Stitches / Hemorrhoids:

Bleeding should taper in the week following delivery, and ultimately stop altogether. When breastfeeding, the patterns of bleeding are variable. You may find that the bleeding stops completely by the 5th to 6th day after you deliver. On the other hand, you may have intermittent bleeding/spotting or light continual daily spotting that lasts for quite some time. Even past 6 weeks. HOWEVER, if your bleeding doesn’t subside and remains heavy or clotty for longer than a week, please call the office. We may not recommend anything at that time, but we’ll want to remain in close contact with you. Sometimes women pass tiny pieces of membrane in the days following delivery. This is fairly common. The uterus is usually very effective in removing loose bits of membrane and tissue as it “cleans house.” Rarely, if the bleeding is significant, we may need to help the uterus in the housecleaning process. Help may be in the form of a medication to cause the uterus to contract harder, thus expelling residual tissue and blood clots. At times we

may also need to help by scraping the inside of the uterus, called a D&C. This can usually be done in the office but if necessary, can be done at the hospital.

The stitches we use to repair episiotomies or lacerations are dissolvable. That means that they last long enough to allow complete tissue healing before dissolving completely. We do not need to remove any stitches. Sometimes women notice the knots hanging loosely weeks after delivery. Don't worry, they'll fall out as soon as they have dissolved completely underneath the surface of the skin. It means that they've nearly completed their task.

When you first get home, your perineum may be quite sore, swollen, and bruised. This can be expected, as you did JUST GIVE BIRTH! Ice packs, a soft pillow, and pain medications (Motrin or Vicodin) should ease the pain just enough. Some women find that using a donut pillow (with a hollow center) works well, especially if hemorrhoids are a problem as well. Sitting in a tub of warm water with Epsom salts (takes the sting out of the water) may help relax you and ease the tenderness. The discomfort usually resolves in 7–10 days, but sometimes more time is required. If you notice that the redness doesn't go away or that the discomfort steadily increases, or if you notice pus coming from the repair site, call us immediately. Infections are very rare (surprisingly) but may require prompt attention. In the absence of any problems complete healing occurs usually by about 4–5 weeks.

If hemorrhoids have been a problem for you during your pregnancy, they most likely will cause a problem during the immediate postpartum period, before slowly going away. The best advice is to use ice packs to reduce swelling, and use Hydrocortisone 1% cream several times daily. Don't worry! Most all of them become much less symptomatic over a few short weeks. If the hemorrhoids become increasingly painful and hard, however, let us know. Occasionally, blood clots form inside the hemorrhoidal veins, causing extreme pain and inability to sit. If this happens, surgical drainage of the thrombosed (clotted) vein is usually required (instant relief!!!).

If a cesarean section was performed, the incision usually heals very nicely, and does not require a lot of attention. Steri-strips were applied at the hospital prior to your discharge. Leave them alone. We'll take them off at your 2-week postpartum visit. While the incision heals, don't be nervous if it gets wet in the shower. Just pat dry when getting out (don't rub the incision or you'll inadvertently remove the steri-strips. If you notice the incision getting red, swollen, or leaking pus or blood, call the office. Otherwise, leave it alone and it will probably heal up very nicely.

Sex:

If you find that you've gotten enough sleep to where you can begin thinking about other things, you may find that you begin to consider sex again. As long as you are healed up, you have our blessing. If you are breastfeeding, consider using a lubricant such as Astroglide (available at Long's or other pharmacies). When a woman breastfeeds, there are very low levels of circulating estrogen in her body. As a result the vagina, which is dependent upon estrogen for lubrication and elasticity, becomes thin, dry, and somewhat stiff (lacking normal elasticity). Lubricants help to make intercourse more comfortable. For the first few times, start very slowly.

Husbands, the sex isn't really about you this time... Your wife is likely to be very tentative the first few times, so go at her pace, and make her feel as comfortable as possible. Don't presume everything is feeling okay for her unless she tells you. Allow her to take her time.

By the way husbands, did I mention that the sex isn't about you the first few times after delivery???

The Moody Blues and Darker Shades

So you've finally come home with your little miracle. Hopefully, your experience was as pleasant as childbirth can be. Keep in mind that it is common to have mixed emotions about your newly and dramatically changed life. In fact, as many as 80% of women will experience POSTPARTUM BLUES ("baby blues") after delivery. This transient mood disturbance is VERY common. It most typically occurs within 3 to 10 days after delivery, and can last from days to several weeks. If you are tearful for no apparent reason, feel fatigued, irritable, unable to sleep or sleep all of the time, or if you are moody and feel like you can't cope with the new changes, then you may have the postpartum blues. These symptoms are common, as caring for your newborn is a 24-hour-a-day job. This new responsibility is demanding and at times can be very frustrating. If you find yourself experiencing the blues, try to set aside time during the day just for yourself – doing other things that you enjoy, like taking a hot bath, exercising, writing letters, or even just catching up on sleep! Find family members or close friends to watch your infant for just a few hours periodically to give you "sanity time" for yourself. Keep in mind that this sense of feeling down will most likely pass in a couple of weeks.

If a few weeks have passed since your delivery and you feel that the "Baby Blues" have not passed and in fact have worsened, you may have POSTPARTUM DEPRESSION. This condition may also be accompanied by feelings of guilt and worthlessness, or having dangerous thoughts about yourself or your infant. Women who are more likely to develop postpartum depression are those moms who have a personal or family history of depression or those who have suffered from severe PMS. Although less common than the postpartum blues, postpartum depression affects about 10–15% of all mothers.

Postpartum depression can last up to 6–9 months. If treated, it carries an excellent prognosis. Unfortunately, 80% of the time this problem goes undetected and untreated. Delayed diagnosis unnecessarily prolongs the depressive state and makes it more difficult to treat. In addition, it can have a devastating effect on a woman's life and the health of her family, as she sinks deeper and deeper into depression. Therefore, diagnosis and prompt treatment consisting of support, psychotherapy, and medication are of paramount importance.

If you feel like you may have symptoms of postpartum depression, please make the effort to let us know. Simple measures can be instituted early so that you can be on the road to recovery in a short period of time. We can refer you to several counseling centers that specialize in the complex issues associated with postpartum depression. In addition, we can prescribe medications that are extremely safe and very effective in treating hormonal imbalances that are found in women with this condition. Lastly, national organizations devoted to the study of postpartum depression also provide literature and newsletters for the general public.

The only way we can help you determine whether or not you are suffering from this relatively common and *very treatable* problem is if you share with us what you are experiencing. We would like to help you, so please don't hesitate to ask!!!

Postpartum Contraception

THE LEAST-READ SECTION IN THIS WHOLE BOOK...

Something near and dear to the hearts of new parents is the subject of post-partum contraception. In this section, we will explain the most popular options for those couples that would like to wait awhile before expanding their families...

Birth Control Pills:

The most popular form of contraception following the delivery of a child remains oral contraceptives. This is true despite the popular misconception regarding the use of oral contraceptive pills while breastfeeding. Some women still believe that the hormones found in oral contraceptives can be dangerous to their young infants. This simply is not true. Studies have confirmed that the hormones associated with birth control pills, both estrogen and especially progesterone, do enter into breast milk, but have no clinical impact whatsoever on infants. There are many years of retrospective data that confirm the safety of birth control pill use during breastfeeding. We now prescribe oral contraceptive pills probably more than any other form of contraception device because of its long track record of safety and effectiveness.

Another area of concern regarding the use of birth control pills is the impact they may have on breast milk supply. Physiologically speaking, if a woman takes birth control pills immediately after giving birth, she will not lactate. However, once lactation is initiated, estrogen-containing birth control pills will not stop it. Estrogen containing pills may, however, decrease the volume of milk produced in varying degrees. Therefore...

We typically divide moms interested in contraceptive pills into two camps as follows:

1) **Moms who produce enough breast milk to feed a small village.** These moms will rarely notice a significant drop in breast milk supply and therefore do quite well on standard-dose birth control pills. The benefits derived from the use of estrogen-containing birth control pills include significant help with the emotional roller coaster new moms experience in the first several months following delivery. In addition, estrogen in standard birth control pills helps to restore the vagina to a more natural condition. There is increased lubrication and elasticity of the vaginal tissue, which contributes significantly to making sexual intercourse more comfortable. In addition, hot flashes often experienced by moms who breastfeed are relieved quite effectively with standard or low-dose estrogen-containing birth control pills.

2) **Moms who produce just barely enough milk for their newborns.** We find that these moms may sometimes have just enough of a drop in breast milk production when taking standard or low-dose estrogen-containing birth control pills that their infants become more irritable and experience inadequate weight gain. For these moms, there is the “mini-pill.” **This is a low-dose, progesterone-only pill that is effective only in moms who are breastfeeding or pumping regularly (a minimum of five times daily).** The benefit of this pill is that there is little or no impact on the breast milk supply whatsoever. The drawback to this type of pill is that it has to be taken at the same time each day and is effective only when used during full-time breast feeding or pumping. In addition, there is no benefit to the vaginal tissue or control of hot flashes.

Barrier Methods:

Devices, including condoms, diaphragms, or cervical caps are used primarily for women who for one reason or another can't tolerate birth control pills. They are good protection against pregnancy **only** when used correctly. The pregnancy rates associated with barrier methods are as follows: with typical use over a one-year period, the pregnancy rate with condoms is 12%. That is, 12% of women using condoms regularly for one year will become pregnant. During breast-feeding, this percentage would be less, as lactation suppresses ovulation. The pregnancy rate associated with diaphragm use over one year's time is approximately 18%. To put these numbers into perspective, pregnancy rates with birth control pills are roughly 1% to 2% per year.

Intrauterine Device:

An increasingly common contraceptive device used during the post-partum period is the intrauterine device. The rise in popularity of the IUD has occurred in the face of great conflict. There have been many **myths and misconceptions** associated with today's IUD. In the 1970s, an IUD called the Dalkon shield was manufactured and subsequently taken off the market due to its contribution to a huge increase in pelvic infections that sometimes resulted in permanent infertility. As it turned out, a manufacturing flaw caused these infections. The Dalkon shield consisted of a main circular part that rested in the uterus. Like most other IUDs, a thread was attached to this main part. This "tail" ran through the cervix and protruded slightly into the vagina. The purpose of this thread was simply to provide a means of confirming its presence and to facilitate an easy removal. For this particular IUD, however, a **braided multi-filament thread** was used. This gave bacteria in the vagina an opportunity to "wick" (climb) up the thread in all of its cracks and crevices into the uterus. After this was discovered, the Dalkon shield was taken off the market, and all subsequent IUDs were manufactured with a **monofilament thread**. **The monofilament tail prevents bacteria from gaining access into the intrauterine cavity, thus virtually eliminating the opportunity for developing an infection.**

Previously it had been thought that the IUD worked by preventing implantation of fertilized eggs. Having studied this issue in depth, we now know that **the mechanism of action of an IUD is spermicidal**. The way this was discovered is very interesting. Researchers took a group of women desiring permanent sterilization by tubal ligation, and divided them into two groups. In one group, IUDs were placed for a time prior to the surgical sterilization procedure. On the morning of their tubal ligation procedure, the women in both groups had "unprotected" intercourse. During the actual sterilization procedure, the intrauterine cavities were irrigated and the contents of the irrigant were studied microscopically. In addition, the contents within the resected segments of fallopian tubes were inspected microscopically, as well.

What they discovered was interesting. In the group that did *not* have the IUD, they found living, motile (moving) sperm in both the uterine cavity irrigant and the fallopian tube segment, just as one would expect. In the group that did have the IUD, they found dead sperm in the uterine cavity irrigant, and NO sperm in the fallopian tube segment. Upon further research, they discovered that the device causes swelling in the endometrial cells lining the uterus. This sterile inflammatory reaction causes these cells to burst and release lysozymes that are spermicidal.

The risk of infection related to IUD use is most prominent within the first 20 days and usually associated with contamination during the insertion process. Following the first twenty days, **the risk of infection is limited** so long as patients who utilize this form of contraception are monogamous. It has been found that there is an increased risk of infection with multiple sexual

partners. Some side effects associated with the IUD include **cramping and heavier periods when menses have resumed** following cessation of breastfeeding. This usually occurs for the first several menstrual cycles and then **regresses**, as the uterus becomes used to the presence of the IUD.

The IUD method of birth control is as effective in preventing pregnancy as birth control pills when used correctly, or tubal ligation, or vasectomy. The IUD is FDA-approved to remain in the uterus for up to **five to ten years (depending on which IUD is chosen)** before removal is mandated. Once the device is removed, conception can take place as soon as the sterile inflammatory response resolves, which is usually very quickly (a few weeks).

The one drawback to the IUD is its expense. **Insurance companies oftentimes will cover either the device or the insertion, although sometimes they cover both the device and the insertion and sometimes they cover neither one.** The fee for both the device and insertion can range from \$450.00 to \$900.00. Compared to the cost of birth control pills, the IUD would pay for itself in approximately 20 to 24 months. **If you are interested in the IUD, please ask us about the differences between the Paraguard (non-hormonal) or the Mirena (progesterone-containing) IUD.**

Depo-Provera:

Depo-Provera is another alternative for postpartum contraception that is safe with breastfeeding. However, it is used much less commonly because of its known association with significant **weight gain**. Depo-Provera is an injectable progesterone contraceptive agent usually administered **every three months**. This contraceptive steroid quite effectively suppresses ovulation. It is very effective if barrier methods are not desired and the patient is forgetful about taking birth control pills daily. The advantage of this form of contraception is that it is “user friendly.” One shot every three months is all that is necessary. Because it suppresses ovulation and does not contain estrogen, women using Depo-Provera are typically amenorrheic (no menstrual periods). **This form of contraception is highly desired among women where weight gain is not a concern.**

Tubal Ligation/Vasectomy/Tubal Occlusion (Essure®)

Permanent sterilization in the form of tubal ligation can be performed either **immediately following delivery under epidural or spinal anesthesia** or after the uterus has returned to its normal size, which takes about six weeks. If the patient desires the latter choice, then the tubal ligation is usually performed via a laparoscopic approach. This means a trip to a surgery center and being put to sleep for the procedure. The procedure usually takes all of 45 minutes and is accomplished through two puncture wounds in the abdomen, one in the umbilicus and one in the suprapubic area. A laparoscope is placed through the umbilicus and another small instrument is placed through the incision in the suprapubic area. The fallopian tubes are cauterized and transected. As an alternative, special clips or rings may be placed around the fallopian tubes. Recovery from this type of surgical sterilization takes about three to seven days.

Lastly, vasectomy is another form of permanent sterilization. This procedure is performed in the **doctor's office** and usually completed in **25 minutes**. It entails only minimal discomfort and requires no significant anesthesia other than a local preparation. **It is entirely possible to have a vasectomy on Friday and be back to work on Monday.**

Vasectomy and tubal ligation are both 99% effective; however, some failures do occur due to recanalization of the fallopian tubes or vas deferens. The incidence of this, however, is quite low.

I am also happy to offer Essure® for office-based, non-surgical permanent sterilization. This procedure is becoming more popular to provide permanent contraception for those who are sure their childbearing days are over. Unlike classic tubal sterilization, Essure® occludes the fallopian tubes *without using any incisions*. **It can be performed under local anesthesia in the office, depending on insurance, but is *not* associated with postoperative pain like standard laparoscopic tubal ligations or vasectomies.** It takes less than 30 minutes to perform the Essure® procedure (**I've done it in as little as 8 minutes**), which is less time than a laparoscopic tubal ligation.

The Essure® procedure is about 99.7% effective (compare this to the effectiveness of tubal ligation: 99.1%; and vasectomy: 99.85%; and the Intrauterine Device 99.2%). Most women who have the procedure return to their usual daily lives within one day of the procedure.

This procedure involves placing a very small micro-insert (shaped like a small flexible spring) through the cervix into the entrance of the fallopian tubes located at the top of the uterus. Placement is accomplished by using a hysteroscope, an instrument that allows visualization of the entire uterine cavity. The micro-inserts contain no hormones, and the procedure has no impact on a woman's natural hormone balance. The device works by inducing scar tissue to form over the insert, blocking the fallopian tube and preventing fertilization of the egg by sperm. After three months, an x-ray examination is performed to confirm tubal occlusion, after which couples can resume intercourse without using other contraceptive devices.

If you are considering permanent sterilization, please ask us about the Essure® procedure.

Should you have any questions regarding any of these methods of contraception, please don't hesitate to call and ask. At the time of your 6-week appointment, we will ask which method you would like to use, so please be prepared.



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