David M. Bookout M.D., F.A.C.O.G.

WALNUT

John D. Bertrand M.D., F.A.C.O.G.

James K. Richards M.D., F.A.C.O.G.

Jeffrey M. Thurston M.D., F.A.C.O.G.

Jane E. Nokleberg M.D., F.A.C.O.G.

Julie M. Hagood M.D., F.A.C.O.G.

Hampton B. Richards M.D., F.A.C.O.G.

Congratulations!!!

Obstetrics & Gynecology Associates

We are pleased to welcome you to our Prenatal Care Program. If your pregnancy is normal, you will be seen at least every six weeks until you are 28 weeks; then more frequently thereafter. If problems exist, you may be seen more often. We strongly recommend that you keep your appointments, eat a well-balanced, high-protein diet, and avoid smoking and drugs. While you are pregnant, your appointments will be at our OB Office, Suite 209, in the Margot Perot building. The phone number is 214-739-8511. If you have questions for the nurse or your physician please call our main number at 214-363-7801. During your pregnancy your appointments will be scheduled so that you will meet each physician in our group in that any one of them may attend your delivery.

You should feel comfortable with your decision to choose Presbyterian Hospital for our delivery. The Margot Perot Building provides excellent facilities for women and children, including a full time anesthesiologist in labor and delivery, and 10 labor-delivery-recovery (LDR) rooms. Presbyterian has an outstanding neonatal intensive care unit staffed by nine qualified neonatologists and one developmental physician. You will need to fill out and turn in the pre-registration form that is enclosed in your folder.

Please read through this folder and write down any questions you have so that you do not forget them when you come in. We hope you will be pleased with our team approach to your care.

Again, Congratulations!!!!

Walnut Hill OB/GYN Associates

8305 Walnut Hill Lane, Suite 100 • Dallas, Texas 75231 214.363.7801 • www.walnuthillobgyn.com

DRUGS AND PREGNANCY

As a general rule, no drugs should be taken during pregnancy unless the benefit of that medication is significant. This includes over-the-counter as well as prescription drugs. There is no drug which we can guarantee to be safe.

You will be given a prescription for prenatal vitamins that you may fill if you wish. Some of the over the counter iron preparations include Feosol, Slow Fe, Hemaspan, Niferex, and Irospan. These should be taken once or twice daily.

During your pregnancy, the most commonly used drugs that are known to be harmful are alcohol and cigarettes. There is good evidence that greater than one ounce of pure alcohol per day is detrimental to fetal development. There is well known association between cigarettes and babies that have a low birth weight. There is also evidence that suggests an increased risk of miscarriage and premature delivery with cigarette smoking.

Drugs to take for common medical problems during pregnancy: (These, like other drugs, should not be taken for "minimal" symptoms. Before taking any medication not listed please call our office).

Cold/Sinus Congestion: Sudafed, Actifed, Chlor-trimeton, or Benedryl (25 Mg) Use a vaporized at night, increase fluid intake, Call with temp. 101 or greater.

Cough: Robitussin DM
Sore Throat: Chloraseptic Spray, any type of Lozenges
Chest Congestion: Robitussin Expectorant
Headaches: Tylenol or Extra Strength Tylenol
Upset Stomach and/or Diarrhea: Kaopectate, or Imodium Ad
Indigestion/Hearth Burn: Meaalox, Mylanta, or Tums
Constipation: Stool softeners (Surfak, Senokot, or Colace)
Natural Bulk (Metamucil, Konstel, or Fibermed)
Increase your water to 6-8 glasses per day
No laxatives or enemas
Gas: Gas Ex
Calcium Supplements: OS Cal, Calcet, Fosfree, or Citracal (1 gram per day
If you consume no dairy products; 250 mg
Supplement = 1 serving)
Skin Irritation/Rash/Itching: Calamine, Caladryl lotion, or Benadryl cream
Cortaid
(Use only for a limited amount of time)
Skin Infection: Neosporin Ointment
Hemorrhoids: Preparation H, Anusol Cream

Please call the office with any ongoing problem.

MORNING SICKNESS

Nausea and vomiting many times occurs during the early months of a pregnancy. Although it is frequently called "Morning Sickness", it can occur at any time of the day or night. Usually it disappears after the third month.

Morning sickness is actually the result of the influence of increased amounts of estrogen and progesterone that are produced by the ovaries early in the pregnancy. Because of the increasing levels of these hormones, the secretory cells in the stomach increase their production of gastric juices. But at the same time, the bowel slows down its ability to empty the contents of the stomach. This then causes a feeling of nausea, and in some cases, vomiting.

To prevent morning sickness, try the following suggestions until you find one that works for you:

- Eat a piece of bread or a few crackers before you get out of bed in the morning, or when you feel nauseated.
- Get out of bed slowly. Avoid sudden movements.
- Have some yogurt, cottage cheese, juice or milk before you go to bed, or before you get up. Or try one of these if you have to get up during the night.
- Eat several small meals during the day so your stomach doesn't remain empty for very long.
- Eat high-protein food eggs, cheese, nuts, meats, etc. as well as fruits and fruit juices. These foods help prevent low levels of sugar in your blood, which can also cause nausea.
- Drink soups and other liquids between meals instead of with meals.
- Avoid greasy or fried foods. They're hard to digest.
- Avoid spicy, heavily seasoned foods.

To remedy morning sickness, try these suggestions:

- Sip soda water (carbonated water) when you begin to feel nauseated.
- Get fresh air take a walk sleep with a window open.... Use an exhaust fan or open a window when you cook.
- Take deep breaths.
- Try any of the suggestions listed above under prevention.

If vomiting persists, or it becomes difficult to retain foods/liquids, you should contact your doctor. Anti-nausea medications available over-the-counter should be avoided unless they are prescribed by your physician. You may, however, try Nestrex (no prescription is needed for this) – take one in the morning, two in the afternoon, and two at bedtime.

EXERCISE

Within the past twenty years, the United States has experienced a "Fitness Revolution". Many people, including pregnant women, have sought the benefits of exercise. Many women in the nineties approach their pregnancy with these goals in mind: a healthy baby, an efficient delivery, and a quick return to the pre-pregnancy body. Today's woman sees exercise during pregnancy as an integral part of her prenatal program. The following are exercise guidelines for pregnancy and postpartum:

- 1. Regular exercise at least three times a week is preferable to intermittent activity. Competitive exercise is discouraged.
- 2. Vigorous exercise should not be performed in hot, humid, weather or during a period when one is otherwise ill.
- 3. Jerky, bouncy motions should be avoided. Exercise should be done on a wooden floor or carpeted surface to reduce shock and provide sure footing.
- 4. The rapid flexion or extension of joints should be avoided because of the laxity of the joints. Activities that require jumping, jarring motions, or rapid changes of direction, should be avoided because of the instability of the joints. Because of this connective tissue laxity and risk of joint injury, stretches should not be taken to the point of maximum resistance.
- 5. Vigorous exercise should be preceded by a five-minute period of warm-up and a five minute period of cool-down.
- 6. Heart rate should be measure at times of peak activity and not exceed 140-150 BPM.
- 7. Care should be taken to gradually rise from the floor so that one does not become hypotensive (low blood pressure).
- 8. Liquids should be taken liberally before and after exercise to prevent dehydration.
- 9. Women who have been sedentary should begin physical activity with very low intensity and advance very gradually.
- 10. If there are any unusual symptoms that occur, the activity should be stopped and a physician consulted.
- 11. Strenuous activity should not exceed 30 minutes in duration.
- 12. No exercise should be performed in supine position after the fourth month of pregnancy.
- 13. The core body temperature should not exceed 100.4.

14. One exercise that should be done liberally throughout pregnancy is the pelvic tilt, which strengthens abdominal musculature and reduces the strain on the back. This can be done lying or sitting. Other good exercises during pregnancy and postpartum are Kegel exercises. These will not alter major anatomic defects, but in the patient with mild pelvic relaxation, the regular use of Kegel exercises may produce some symptomatic relief.

The following is a list of contraindications to exercise during pregnancy. They are:

- 1. Hypertension
- 2. Anemia
- 3. Thyroid Disease
- 4. Diabetes
- 5. Cardiac Arrhythmias or palpitations
- 6. History of intrauterine growth retardation
- 7. History of bleeding during present pregnancy
- 8. Excessive obesity
- 9. History of extremely sedentary lifestyle
- 10. History of three or more spontaneous abortions
- 11. Premature labor or ruptured membranes
- 12. Multiple gestations
- 13. Diagnosis of an incompetent cervix
- 14. Bleeding or diagnosis of placenta previa
- 15. Diagnosed cardiac disease

The following is a list of signs and symptoms which should signal the patient to stop exercise. These include:

- 1. Pain of any kind chest, back, head, pubic, hip, etc...
- 2. Vaginal bleeding, leaking of amniotic fluid
- 3. Dizziness, faintness
- 4. Shortness of breath
- 5. Uterine contractions frequent at 20 minute intervals
- 6. Palpitations, tachycardia (fast heart beat)
- 7. Persistent nausea and vomiting
- 8. Difficulty in walking
- 9. generalized edema (swelling)
- 10. Decreased fetal activity

Pregnancy is a time to maintain fitness, not to strive for dramatic improvements. Please note that you should avoid water and snow skiing, horseback riding, and scuba diving while you are pregnant.

Additional Information

Because the effects of several substances on fetal development are not known, contact with these agents should probably be avoided or minimized if possible. These substances include fumes from oil base paints, chemicals, insecticides, artificial sweeteners, caffeine, exhaust fumes, large doses of vitamins and unusual herbs.

It would also be advisable to avoid raw or undercooked meat and contact with cat feces as these are potential sources of an infection called toxoplasmosis. Pregnant women should avoid empting cat litter or feces and sleeping in close contact to a cat. Fortunately most congenital toxoplasmosis infections are rare and do not manifest into serious problems at birth.

Keeping your body temperature regulated is important. Therefore avoid hot tubs, spas, saunas, or tanning beds (a warm bath is fine).

We do not recommend traveling during the first or last three months of your pregnancy. If you must travel, stop frequently, empty your bladder, and walk. You should avoid douching and the use of tampons during your pregnancy. Sexual activity may continue through your pregnancy, should a problem arise the doctor will advise you.

If at any time you have a sudden gush of water or leakage call the office immediately.

Symptoms of miscarriage: active bleeding, passing of tissue or clots and cramping. If you happen to pass any tissue, save is in a jar with water added. Please do not hesitate to contact the office should you have any problems or questions.

SHOULD I EAT THE FISH I CATCH? A GUIDE TO HEALTHY EATING FOR WOMEN AND CHILDREN



INTRODUCTION

Fish can be an important part of a healthy diet, but some fish have harmful amounts of mercury. Mercury consumed by a pregnant or nursing woman or a young child, can harm the developing brain and nervous system.

You can get the benefits of fish and avoid the risks of mercury by following fish advisories. Contact your Health Department for advice about the fish caught and sold in your area. If there is not any special advice for your area, follow the federal advice given here.

In 2001, the U.S. Environmental Protection Agency and the U.S. Food and Drug Administration issued national advisories concerning mercury in fish.

FRESHWATER FISH CAUGHT BY FAMILY AND FRIENDS

Contact your local Health Department for specific advisories for your area. If there are not any, follow the federal advisories below. The U.S. Environmental Protection Agency (EPA) advises pregnant women, women who may become pregnant, nursing mothers, and young children to

- * Limit consumption of freshwater fish caught by family and friends to one meal per week
- * For adults, one meal is 6oz of fish (cooked weight)
- * For children, one meal is 2oz of fish (cooked weight)

* For ocean fish caught by family and friends, use the advice for fish purchased in stores and restaurants.

BREASTFEEDING

ADVANTAGES: Human milk is a perfect balance of nutrients. It contains substances to help resist infection, mature the lining of the gut, assist with digestion and reduce the chance of allergy. When the baby nurses, a hormone called oxytocin causes the uterus to contract, reducing bleeding and shrinking the uterus back to its normal size. Milk production uses fat that accumulated during pregnancy, speeding weight loss. Breast milk is free and requires no preparation or storage. Breastfed infant stools have no odor and do not stain. Many mothers find breastfeeding relaxing, restful and rewarding.

DISADVANTAGES: Some nipple tenderness may occur for a few days due to stretch by the infant's sucking. Leaking of milk may occur until the supply balances the baby's needs. Breastfed babies normally feed more often than formula-fed babies because the milk is more quickly and completely digested. Parents cannot see how much breast milk the infant is taking and must rely on other signs of adequate nutrition such as infant satisfaction and weight gain. There are NO known disadvantages for the infant.

BREASTFEEDING WITH SUPPLEMENTATION

ADVANTAGES: Supplementation allows the baby to receive nutrients if he is not able to nurse, if the mother is temporarily unable to breastfeed, or if the mother is separated from the baby. Breast milk may be manually expressed or pumped for supplements, or formula may be used.

DISADVANTAGES: Skipped feedings without manually expressing or pumping can cause breast engorgement and a reduction in milk supply. Formula supplementation can dress the baby's appetite so that he/she does not nurse well. It is well established that giving artificial nipples (including pacifiers) before breastfeeding can cause nipple confusion. Unnecessary supplementation with formula exposes the infant to the possibility of allergic reaction.

FORMULA FEEDING

ADVANTAGES: Nutrient content of formula is as close to breast milk as manufacturers can make it. Formula feeding allows others to assume feeding tasks. Some mothers find formula feeding less inhibiting or embarrassing. Parents can see the amount of formula taken in by the infant. Formula-fed babies usually feed less often than breastfed babies because the formula is less completely digested and stay s in the baby's stomach longer.

DISADVANTAGES: No formula matches the ideal balance of nutrients contained in breast milk. Formulas LACK substances that help resist infection, mature the guy, aid in digestion, and resist allergy. Formulas are expensive and formal feeding requires bottle sanitation, formula preparation, and refrigeration. Formula-fed infant stools have an odor and may stain diapers. Maternal breast engorgement and leaking can occur in spite of medication to suppress milk production.

PRENATAL SCREENING FOR DOWN SYNDROME PATIENT INFORMATION

Your physician has provided you this information sheet regarding the screening test for possible down syndrome. We hope that we can answer most of the questions you might have.

WHAT IS DOWN SYNDROME?

Down syndrome is caused by an accident in cell division in which the pair of chromosomes #21 fails to separate so that both end up in a single germ cell (sperm or egg). When fertilization takes place the two chromosomes #21 are joined by a third chromosome #21 from the other parent, thus giving the fertilized cell three chromosomes #21 instead of the normal two. Infants who survive to birth suffer mental retardation, a high incidence of heart defects, a high incidence of certain types of leukemia, short stature and abnormalities of the head and face among other problems.

WHAT PRE-NATAL TESTING CAN BE DONE TO DETECT DOWN SYNDROME?

The fetus produces a protein called alpha-fetoprotein (AFP) which is not normally found in the blood of adults. During pregnancy, however, alpha-fetoprotein leaks into the mother's circulation form the amniotic fluid. The amount in the mother's blood varies according to the stage of pregnancy and for that reason establishing correct dates is extremely important. Fetuses with Down syndrome leak decreased amounts of alphafetoprotein into the mother's circulation and this is the basis of one of the screening tests. For a given week of pregnancy the mother's blood contains a lower level of alphafetoprotein than in a normal pregnancy. It should be emphasized here that smoking can lower alpha-fetoprotein in levels and can cause a false positive test. If you have smoke near the time when you blood was drawn for this test, please alert your physician so that arrangements can be made for retesting.

If AFP levels along are tested, only about 20-25% of cases of Down syndrome will be detected. Two additional tests, human chorionic gonadotropin (HCG) and unconjugated estriol (UE3), increase the detection rate to 60-65%.

WHAT DOES A POSITIVE SCREENING TEST MEAN?

If three tests detect 60-65% b of cases of Down syndrome, clearly 35-40% of these cases will not be found. Like all laboratory tests, these are nor perfectly capable of picking up every case of Down syndrome (they are not 100% sensitive). Positive tests likewise do not always indicate that this condition is present (the tests are not 100% specific). The risk of Down syndrome increases with the age of the mother. By age 35 the risk is about one in 270 compared to 1:1250 for a 25 year old. Since women over 35 account for only 5% of all pregnancies but 20% of all cases of Down syndrome, further studies such as amniocentesis are performed after age 35 and screening for Down syndrome is not necessary. If you are under age 35, the screening results compare your risk to that of a 35 year old, you screening test is said to be positive. If a thousand women are screened, about 70 will have positive results. Of these seventy, only one or two will actually have babies with Down syndrome.

WHAT FACTORS CAN AFFECT TEST RESULTS?

Maternal age, weight, race, insulin dependent diabetes and twin pregnancies can all alter results. If this information is provided, these factors can be corrected for in our calculations. For unknown reasons, patients of African-American descent normally have about 10% high levels of AFP.

The most common known cause of a positive screen in the absence of fetal abnormality is inaccurate dating of the pregnancy. Remember that the dates are established based on the last menstrual period, a fact dependent on the precise memory of an event that occurred several weeks in the past. Since normal levels of AFP vary with each week of pregnancy, inaccurate dates can cause a false positive or false negative result. Women with previous history of infants with Down syndrome are at greater risk although most abnormalities occur in families with no prior history. Normal ranges have been established during weeks 15-20, but the tests are most accurate between weeks 16-18 pregnancy. As previously stated smoking can lower alpha-fetoprotein levels and cause a false positive screen.

WHAT STEPS CAN BE TAKEN IF THE SCREENING TEST IS POSTIVE?

Your doctor will discuss with you the additional testing necessary to confirm the screening test results. The accuracy of the duration of pregnancy should be checked, often by ultrasound. Amniocentesis might be suggested. This is a test in which fluid from the sac surrounding the baby is removed by needle and can be examined directly for levels of AFP. Cells from this fluid can be examined to determine chromosome abnormalities including Down syndrome. Amniocentesis involves a small risk to the fetus and your doctor should discuss this risk with you weighed against the risk of fetal abnormalities.

PRENATAL SCREENING FOR NEURAL TUBE DEFECT PATIENT INFORMATION

Your physician has provided you with this information sheet regarding possible neural tube defect. We hope that we can answer most of the questions you might have regarding this condition and the tests that detect.

WHAT IS NEURAL TUBE DEFECT?

Neural tube defects are a variety of malformations originating from the tube-like structure in the embryo that eventually forms the brain and spinal cord. They range from severe lethal defects such as an encephaly (virtual absence of brain) to spina bifida. In the latter condition there is a defect at the base of the spine sometimes associates with a sac-like protrusion called meningomyelocele. These infants can have partial or total paralysis of the legs along with poor bladder function.

WHAT FACTORS CAN AFFECT TEST RESULTS?

Alpha-fetoprotein is a protein found n the blood of the fetus but not in adults. During pregnancy, alpha-fetoprotein leaks in the mother's circulation from the amniotic fluid. The amount in the mother; blood varies according to the stage of pregnancy and for that reason establishing correct dates is extremely important. Fetuses with open neural tube defects such as meningomyelocele leak increased amounts of alpha-fetoprotein into the mother's circulation and this is the basis of the screening test.

WHAT DOES A POSITIVE SCREENING TEST MEAN?

Out of every thousand pregnant women who are tested, about 40 will have a positive screen. Only one or two of the 40 will actually have an infant with neural tube defect. Women with a negative test have the same risk as that of the entire population, or about one in five hundred. A negative screen therefore does not guarantee a normal baby. Smoking can lower alpha-fetoprotein (AFP) levels. This is important because a test that might otherwise have been positive can instead produce negative results. Your doctor should be informed if you smoke in case provisions to delay testing must be made. A positive screening test does not mean a definite abnormality exists, but it does increase the odd f an abnormality from ONE in FIVE HUNDERED to ONE in FORTY.

WHAT FACTORS CAN AFFECT TEST RESULTS?

Maternal age, weight, race, insulin dependent diabetes and twin pregnancies can all alter results. If this information is provided, these facts can be corrected for in our calculations. For unknown reasons patients of African-American descent normally have about 10% higher levels of AFP. Furthermore the incidence of neural tube defect is lower for this segment of the population. Therefore, cut-off levels for a positive screening test are adjusted accordingly. Ongoing studies may reveal other population trends which can be accounted for in the future. The most common known cause of a positive screen in the absence of fetal abnormality is inaccurate dating of the pregnancy. Remember that the dates are established based on the last menstrual period a face dependent on precise memory of an event that occurred several weeks in the past. Since normal levels of AFP vary with each week of pregnancy, inaccurate dates can cause a false positive or false negative result.

WHAT OTHER CONDITIONS CAN CAUSE A POSITIVE SCREEN?

Other fetal conditions such as defects of the abdominal and chest walls, low birth weight infants, kidney abnormalities, hydrocephalus, and heart defects have been associated with high AFP levels.

WHAT STEPS CAN BE TAKEN IF THE SCREENING TEST IS POSITIVE?

Your doctor will discuss with you the additional testing necessary to confirm the screening test results. The accuracy of the duration of pregnancy should be checked, possibly by ultrasound. The test can be repeated, especially if the results were not too far form the normal range. Amniocentesis might be suggested. This is a test n which fluid form the sac surrounding the fetus is removed by needle and can be examined directly for levels of alpha-fetoprotein. Another test called acetyl cholinesterase can also be performed on the amniotic fluid. Ells from this fluid can also be examined to determine chromosome abnormalities. Amniocentesis involves a small risk to the fetus and your doctor should discuss with you this risk weighed against the risk of fetal abnormalities.

What is Cord Blood?

Cord blood, the blood that remains in your baby's umbilical cord after the cord has been cut, is a rich source of unique stem cells that can be used in medical treatments.

What is Cord Blood Banking?

Cord blood banking is a once-in-a-lifetime opportunity to save your baby's cord blood stem cells for potential medical uses. Having cord blood saved can be lifesaving or life-changing for your family, and ensures that these cells are immediately available to your family if ever needed.

If you don't choose to bank your baby's cord blood, it will be discarded after birth.

How is Cord Blood Used in Medical Treatments?

Cord blood, like bone marrow, is an invaluable source of a type of stem cell that can be used in a variety of medical treatments to regenerate healthy blood and immune cells in cancer patients.

- To date, cord blood stem cells have been used to treat many life-threatening diseases, such as leukemia and other cancers.
- Cord blood is showing potential in research to treat conditions that have no cure today—like brain injury and juvenile diabetes.

How is My Baby's Cord Blood Collected?

Collecting cord blood is a simple, safe, and painless procedure that usually takes less than five minutes. Cord blood is collected immediately after your baby is born. After the umbilical cord has been clamped and cut, the remaining blood in the umbilical cord is drawn into a collection bag. The collection procedure is safe for both the mother and baby and can be performed after vaginal or cesarean births.

What is Cord Tissue?

The umbilical cord (cord tissue) contains **mesenchymal stem cells (MSCs)**, which create structural and connective tissue. These cells are currently being researched as a potential therapy for a broad range of debilitating health conditions and common injuries including spinal cord injury, stroke, and cartilage damage.

How are Mesenchymal Stem Cells Used in Medical Treatments?

Although using cord tissue MSCs in research is still at an early stage, there are more than 80 clinical trials underway using this same type of cell (primarily from bone marrow). Researchers believe that MSCs may also be able to one day help treat conditions such as diabetes, multiple sclerosis, heart failure, liver damage, and bone fractures.

After your baby's umbilical cord has been clamped and cut, and after cord blood collection (if also performed), your doctor or midwife will collect a 4-to 8-inch segment of the umbilical cord

What are stem cells?

Stem cells have the power to save and change lives

Stem cells are the body's "master cells" because they are the building blocks of organ tissue, blood, and the immune system. Stem cells from bone marrow were first used to regenerate blood and immune cells for patients who had received chemotherapy for cancer. In the late 1980s, doctors started using cord blood stem cells to treat diseases that had previously been treated with bone marrow transplantation. Today, cord blood stem cells are successfully being used and saving many lives. And they are also being researched in an exciting new area of medicine called regenerative medicine, where scientists are using cord blood stem cells in experimental treatments for brain injury and juvenile diabetes

Are cord blood stem cells different from other stem cells?

Yes, cord blood stem cells are biologically younger and have unique qualities and advantages compared to other stem cell sources like bone marrow:

- There is less risk of complications when used in transplants.¹
- They are immediately available, and early treatment can minimize disease progression.²
- Freezing them "stops the clock" and protects them from environmental damage, age, and common viruses that will impact the stem cells in our bodies over time.³
- Collection of cord blood is simple, safe, and painless.

Cord blood stem cells are not embryonic stem cells and are not controversial.

What types of stem cells are found within the umbilical cord?

Newborn stem cells can be found in cord blood and the umbilical cord itself (cord tissue). These are **noncontroversial** sources of valuable stem cells that are collected after the umbilical cord has been cut and would otherwise be discarded.

- Cord blood is a rich source of hematopoietic stem cells, which create the blood and immune system.
- Cord tissue is a rich source of mesenchymal stem cells, which create structural and connective tissue.

PEDIATRICIANS

DALLAS

Clinical Pediatric Associates

Dr. Debra L. Burns Dr. Ernie M. Fernandez Dr. Joseph A. Hanig

Pediatric Associates of Dallas

Dr. Michael E. Brown Dr. Maribel Diaz-Esquivel Dr. Early Denison Dr. Christopher K. Dreiling Dr. Charles Dunlap

Dr. Ross L. Finkelman

Forest Hills Pediatrics

Dr. Lori Accordinio

Pediatricians of Dallas

Dr. Somer Curtis Dr. Karen Halsell Dr. Chafen W. Hart

Pediatrics at Campbell Center

Dr. Chris Abel Dr. William Moore

Forest Lane Pediatrics

Dr. Ron Blair

Dr. Chris Straughn

Dr. Chris McGonnell

Preston Centre Pediatrics

Dr. Joseph P. Peterman

Inwood Village Pediatrics

Dr. Christina Gray Deuber Dr. Tammy Lyn Kennedy 214-368-3659 www Dr. J. Patrick Hieber Dr. Roger O. Schorlemer Dr. C. Victoria Shinn

214-369-7661 www.PADnewsletter.com Dr. John R. Foster Dr. Amy Hayes Dr. Susan J. Hubbard Dr. Karen B. McClard Dr. Claude B. Prestidge Dr. Cynthia G. Webb

214-553-0705 Dr. Patricia Wheelahan

214-691-3535 www.PediatriciansofDallas.com Dr. Joe B. Neely Dr. James W. Watkins Dr. Matthew M. Yaeger

> www.DallasPediatricsatCC.com 214-368-6341 214-543-3200

www.ForestLanePediatrics.com

972-284-7770

Dr. Dana Peterman

Dr. Tana Roberts

Dr. Ann Liu Dr. Michelle Kravitz Dr. Damien Mitchell

214-987-0777 Dr. Jennifer Wheeler www.PrestonCentrePediatrics.com

214-956-7337 www.InwoodVillagePediatrics.com Dr. Jane Simms Hamner Dr. Julie Klesse Linderman

www.ClinicalPediatrics.com