

Handbook for Patients
Undergoing
In Vitro Fertilization

**Continuum Reproductive Center
425 West 59 Street (Suite 5A)
New York, New York 10019**

And

**Continuum Reproductive Center-Mt. Kisco
83 South Bedford Road
Mt. Kisco, NY 10549**

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SECTION A: WELCOME

Thank you for choosing the **Continuum Reproductive Center (CRC)** as your provider for advanced fertility care. The CRC is one of most respected and successful practices in reproductive medicine and surgery throughout the tri-state area. Our team of physicians, embryologists, and clinical and administrative staff are highly trained professionals dedicated to providing state-of-the-art medical care in a compassionate manner.

The treatment of reproductive problems is challenging for both patients and their providers. Patients are subjected to multiple office visits, early morning sonograms, injections and blood draws, and the physical and emotional demands on the individual and couple can be burdensome. We realize that these demands are often accompanied by concerns over lost work time, childcare issues, and the desire to maintain confidentiality. The demands on the physicians and staff are also great. While we are responsible for the care of hundreds of patients, it is our goal and commitment to provide you with the personalized care you need and deserve. Our team has been designed to maintain this commitment. There will be times when we are unable to attend to your messages and telephone calls immediately, and when scheduling of office visits and procedures interferes with your own schedule(s). We ask for your patience. Please allow our nurses time to respond to your non-emergent calls. If they are unable to answer your questions to your satisfaction, they will ask the physician(s) for guidance. A physician will contact you immediately in the event of an emergency.

We encourage spouses or partners to attend scheduled office visits so that each member of the couple understands the process and the couple remains united in its quest for success. For couples who believe they might benefit from emotional counseling, we work with excellent counselors highly experienced in helping couples deal with the many stresses they encounter.

Our team works for you, and we are delighted to do so! We wish you health and success!

SECTION B: MEET OUR TEAM

Reproductive Endocrinologists

Martin D. Keltz, MD, is **Director of the Division of Reproductive Endocrinology** at St. Luke's-Roosevelt Hospital Center as well as the Continuum Reproductive Center. Dr. Keltz earned his medical degree from New York University School of Medicine and completed his residency training in Obstetrics and Gynecology at New York University/Bellevue Hospital. He completed his fellowship training in Reproductive Endocrinology and Infertility at Yale University Hospital and is Board-Certified in both Obstetrics and Gynecology and Reproductive Endocrinology. Dr. Keltz is a Diplomate of the American Board of Obstetrics and Gynecology and a member of the American Medical Association, American College of Obstetrics and Gynecology, American Society of Reproductive Medicine, American Association of Gynecologic Laparoscopists, Society of Reproductive Endocrinology and New York Obstetrical Society. He has numerous published articles and presented abstracts on saline sonography, uterine fibroids, in vitro fertilization, recurrent pregnancy loss and endometriosis. Dr. Keltz has lectured extensively on reproductive medicine and surgery.

Daniel E. Stein, MD, is **Medical Director of the In Vitro Fertilization Program** at the Continuum Reproductive Center. Dr. Stein earned his medical degree from New York Medical College and completed his residency training in Obstetrics and Gynecology at Thomas Jefferson University Hospital in Philadelphia. He completed his fellowship training at the University of Medicine and Dentistry – New Jersey Medical School. Dr. Stein is Board-Certified in both Obstetrics and Gynecology and Reproductive Endocrinology and Infertility. He is a Diplomate of the American Board of Obstetrics and Gynecology and a member of the American College of Obstetrics and Gynecology, and American Society of Reproductive Medicine. Dr. Stein is a member of the prestigious Alpha Omega Alpha (AOA) medical honor society and is the former president of the Iota chapter of AOA. He has published several articles and scientific abstracts in the fields of endocrinology and infertility, and presented his research at national conferences. Dr. Stein has lectured extensively on a variety of reproductive medical and hormonal topics and has appeared frequently on television news programs and in the print media. He is a lecturer of reproductive endocrinology at national review courses and has served as a course director.

Matthew Lederman, MD, is **Principle Physician at CRC of Mt. Kisco** and is a fellowship-trained Reproductive Endocrinologist and a Board-Certified Obstetrician and Gynecologist. He earned his medical degree from the Chicago Medical School and completed his residency in Obstetrics and Gynecology as well as his fellowship in Reproductive Endocrinology and Infertility at the Albert Einstein College of Medicine/Montefiore Medical Center. Dr. Lederman is a Diplomate of the American Board of Obstetrics and Gynecology and a member of the American College of Obstetrics and Gynecology, American Society of Reproductive Medicine, Society of Reproductive Endocrinology & Infertility, and The Endocrine Society. Dr. Lederman has published scientific abstracts and articles in peer-reviewed journals in the fields of endocrinology and infertility, and has presented his research at national conferences.

Urologists

David Kaufman, MD, is an Assistant Professor of Clinical Urology at Columbia College of Physicians and Surgeons and is the Director of Central Park Urology, a private practice in New York City. Dr. Kaufman completed his Urology training in 1988 at Columbia Presbyterian Medical Center and served as Director of the Male Infertility Unit and Pelvic Floor Rehabilitation Laboratory at St. Luke's-Roosevelt Hospital Center until 1998.

Harris Nagler, MD, is President of Beth Israel Medical Center, Chairman of the Department of Urology, and Professor of Urology at the Albert Einstein College of Medicine of Yeshiva University. He has received national honors and awards including the ACMI Urology Prize and Columbia University's prestigious Drs. Harold and Goldman Lampert Award for Excellence in Clinical Research. Dr. Nagler is the former President of the Society for the Study of Male Reproduction of the American Urological Association and President of the Society of Reproductive Surgeons of the American Society of Reproductive Medicine. He is a member of the Alpha Omega Alpha medical honor society and has published extensively in peer reviewed journals on many Urological topics and has co-edited two books focusing on the treatment of male infertility.

David Weiner, MD, is a board-certified Urologist with an interest in male reproductive disorders. Dr. Weiner completed his Urology training at Columbia Presbyterian Medical Center and is an attending physician in the Department of Urology at St. Luke's-Roosevelt Hospital Center.

Craig Nobert, MD, is a board-certified Urologist and an attending physician in the Department of Urology at St. Luke's-Roosevelt Hospital Center. Dr. Nobert completed his Urology training at Weill Cornell Medical School – New York Hospital. He also earned a Master's of Science degree in Molecular Biology from San Diego State University. Dr. Nobert is an expert in laparoscopic and minimally invasive urologic surgery.

Clinical Team

Rosemary Abreu, RMA, is a registered medical office assistant and completed her training at Sanford Brown Institute in Manhattan.

Ivette Agosto, CMA, is a certified medical office assistant with more than twelve years of specialization in gynecology and fertility care. She is bilingual in Spanish and English.

Atsuko Caggiano, RN, is a registered nurse specializing in fertility care. Ms. Caggiano earned her R.N. degree at Cedar Crest College in Pennsylvania and has over six years of experience in reproductive medicine and fertility care. She is bilingual in Japanese and English.

Irene Forest, RN, is a registered nurse specializing in fertility care. Ms. Forest earned her R.N. degree at Penn State University and has over seven years of medical and surgical experience.

Nadine Farfan, RMA, is a registered medical office assistant and completed her training at Sanford Brown Institute in Manhattan. She has more than twelve years of specialization in gynecology and fertility care.

Beth Henke, RN, is a registered nurse specializing in women's health care and fertility care. Ms. Henke earned her B.A. in Communications from Fordham University and her Bachelor's Degree in Nursing from Pace University.

Kathy Manghese, CMA, is a certified medical assistant with over five years experience in women's health care. Ms. Manghese earned her degree at Ultrasound Diagnostic School in Westbury, New York. She is bilingual in English and Spanish.

Cristina Martinez, NP, is a Nurse Practitioner with over seven year's experience in women's health care. Ms. Martinez earned her R.N. degree at SUNY Binghamton and her N.P. degree at Pace University.

Jessica Rosas, CMA, is a certified medical office assistant with specialization in gynecology, infertility, and in vitro fertilization. She is bilingual in Spanish and English.

Alla Sigal, RN, is a registered nurse specializing in fertility care. Mrs. Sigal has over 17 years of experience in women's health care. She earned her degree in nursing at Kiev Medical School in the Ukraine.

Kennia Santiago, RN, is a registered nurse specializing in fertility care. Ms. Santiago attended Manhattan Marymount College and earned her B.S. in nursing from New York University.

Karen Sullivan, RN, is a registered nurse with over two years of experience in fertility care. Mrs. Sullivan earned her degree in nursing at Stony Brook University in Long Island, New York.

Administrative Staff

Arlene Evans, CMA, is our Departmental Coordinator and office billing manager. Ms. Evans has over twenty years of administrative experience in the medical field.

Nury Navarrete is an administrative assistant with over five years of medical office experience. Ms. Navarrete attended LaGuardia Community College and is bilingual in English and Spanish.

Romaine Singh, AS, has been the Practice Manager for the Continuum Reproductive Center since 2008. Mr. Singh has over 12 years of experience in clinical administration, including over ten years at the prestigious Hospital for Special Surgery in Manhattan. He earned his A.S. in Sociology in his native British Virgin Islands.

Tiffanie Smith is an administrative assistant presently earning an Associate's Degree at Borough of Manhattan Community College

Natasha Wilkins is an administrative assistant and assistant billing manager. Ms. Wilkins earned her Associate's Degree in Marketing at Katherine Gibbs Business School.

Embryology and Andrology Staff

Mary Schalkoff, PhD, HCLD, is laboratory director. Dr. Schalkoff has served as an embryologist since 1986 and was instrumental in the development of the embryology laboratory at Boston IVF, one of the nation's largest IVF institutions. After earning a Master's degree in Zoology from Rutgers University, Dr. Schalkoff completed her PhD in Cellular and Reproductive Biology at Boston College. Dr. Schalkoff is recognized by the American Board of Bioanalysis as a High Complexity Clinical Laboratory Director and is a national laboratory inspector for the College of American Pathologists and the American Society for Reproductive Medicine. She has authored articles in molecular biology and embryology and is an expert in embryo and oocyte cryopreservation.

Eric T. Gonzales, BS, is a senior embryologist and technical laboratory supervisor. Mr. Gonzales has over ten years of experience in embryology, andrology and endocrinology services. He is an expert in in vitro fertilization, intracytoplasmic sperm injection, embryo biopsy and assisted embryo hatching procedures. Mr. Gonzales earned his degree in Biology from the State University of New York at Stony Brook.

Serhan Ozensoy, BS, is an embryologist and andrologist with over five years of experience in reproductive technologies. He received his degree in Forensic Science from John Jay College and has gained expertise in in vitro fertilization, intracytoplasmic sperm injection, and assisted embryo hatching procedures.

Mi-Jung Jung, BA, is a laboratory technician and embryologist-in-training. Ms. Jung earned her BA in Biology and Biochemistry at the State University of New York at Binghamton. She worked for over three years at Weill Cornell Medical College where she did research with transgenic mice and stem cells related to female fertility.

Genetics

Kwame Anyane-Yeboah, MD, is a clinical geneticist at St. Luke's-Roosevelt Hospital Center and Columbia-Presbyterian Hospital and associate professor of genetics and pediatrics. He is board-certified in both clinical genetics and pediatric medicine.

Lorien Tambini, MS, is a Genetic Counselor at St. Luke's-Roosevelt Hospital Center. Ms. Tambini trained in genetics at Arcadia University in Philadelphia.

SECTION C: OVERVIEW OF THE IVF PROCESS

Ovarian Stimulation involves the use of injectable fertility medications by the woman in order to develop multiple "follicles." These follicles contain the eggs. Close monitoring of the woman's response to the medications is required to optimize egg quantity and minimize side effects.



Egg Retrieval involves the removal of the eggs from the ovaries. The egg retrieval is performed 34-36 hours after the HCG injection is administered and is performed under intravenous sedation. No incisions are made.



Egg Insemination and Embryo Culture involves the insemination of the eggs and is performed a few hours after retrieval. The day after the retrieval, the eggs are evaluated for evidence of fertilization [fertilized eggs are called "embryos"]. The embryos are cultured for approximately 4 days before the resulting embryos are transferred into the uterine cavity.



Embryo Transfer involves replacing the embryos into the uterus (through the vagina and cervix). The transfer is performed 3-5 days after the egg retrieval. Rarely, a transfer may be cancelled if no eggs are fertilized.

SECTION D: REQUIREMENTS TO START THE IVF CYCLE

FEMALE:

1. A medical history and physical examination.
2. Records of any prior fertility tests or treatments including operative reports of prior surgical procedures.
3. A saline hysterosonogram - a thin catheter is passed through the cervix into the uterine cavity and saline solution is introduced into the uterine cavity. Transvaginal ultrasound is performed to detect any abnormalities that might compromise implantation of embryos.
4. Pre-conception blood tests: blood count, blood typing, hepatitis, HIV and syphilis tests, hormone tests and possible genetic tests.
5. A pap smear, gonorrhea, and chlamydia testing within the last year.
6. In women >40, a baseline mammogram.

MALE:

1. Hepatitis screen, HIV and syphilis testing, and possible genetic testing.
2. Semen Analysis and strict assessment of the shape (morphology) of the sperm.
3. In cases in which donor semen is to be used, the sample should be shipped to our center by the time the treatment cycle begins.

Note: Patients with underlying medical problems and/or a history of previously complicated pregnancies may be required to have a consultation with a medical doctor or high risk pregnancy specialist prior to initiating the IVF cycle.

SECTION E: MEDICATIONS COMMONLY USED IN THE IVF CYCLE

(NOTE: Please refer to the separate medication consent form provided by our staff)

Lupron™ (subcutaneous injection)

Lupron is the first medication administered in many IVF cycles (Lupron is *not used in all cycles*). Lupron temporarily suppresses pituitary and ovarian hormone production allowing your physician to control your cycle. Lupron is generally started a week before the expected menstrual period. A blood test and sonogram are required before starting Lupron. Once you receive instructions to start Lupron, you will continue injecting this medication every night. Call our nurses *during office hours* to notify them when your period begins. At this time you will be scheduled for an ultrasound and blood test to confirm ovarian suppression. *Do not discontinue Lupron* unless advised to do so by our staff. Common, reversible side effects include hot flashes, vaginal dryness, and irritability.

Gonadotropins

Gonadotropins stimulate the development of multiple ovarian follicles and eggs for retrieval and culture. Gonadotropins consist of FSH (Follicle Stimulating Hormone) and LH (Luteinizing Hormone), or FSH alone.

Commonly used stimulating medications include:

Bravelle™	-	subcutaneous injections
Follistim™	-	subcutaneous injections
Gonal F™	-	subcutaneous injections
Menopur™	-	subcutaneous injections
Repronex™	-	subcutaneous or intramuscular injections

One, or a combination, of medications is administered daily at approximately the same time (usually between 7 pm and 9 pm). At times you might be instructed to inject these medications twice per day. When gonadotropins are started, the Lupron dose might be decreased. We will inform you of your dosage instructions.

Side effects of gonadotropins may include: bloating, abdominal distention, nausea, breast tenderness, and fatigue.

Antagon (Ganirelix)™ or Cetrotide (Cetrorelix)™ – These medications are used only in certain cycles. They suppress pituitary and ovarian hormone production and prevent premature ovulation. These medications are given by subcutaneous injections and not started until at least one follicle reaches 12-14 mm in size.

Human Chorionic Gonadotropin hormone (hCG) (brand names including: Pregnyl™, Profasi™, Novarel™, or Ovidrel™.) - HCG induces final maturation of the egg and initiates release of the eggs from the follicles. Pregnyl™, Profasi™, and Novarel™ are injected intramuscularly. Ovidrel™ is injected subcutaneously. The egg retrieval is scheduled 34 to 36 hours after the injection, just before the actual release of any eggs. It is **essential** that you take the HCG injection at **exactly** the designated time.

Progesterone – Progesterone is a hormone essential for maintaining pregnancy. Progesterone can be administered in a few different forms. Your physicians and nurses will inform you of which form(s) are to be prescribed for you and how many times per day. These options include:

- ◆ **Endometrin™ (2 to 3 times per day) or Crinone™** (1 to 2 times per day) are special progesterone vaginal capsules or gel inserted into the vagina.
- ◆ **Intramuscular injections:** Progesterone in oil (1 cc) might be prescribed intramuscularly every morning starting the day following the egg retrieval.
- ◆ **Intravaginal suppositories** might be prescribed vaginally before bedtime, starting the night of the egg retrieval.

Antibiotics – Doxycycline is started the night before the egg retrieval to prevent procedure related infections. **Please let us know if you are allergic to any antibiotics so that appropriate substitutions can be made.**

Steroids – Medrol™ is a steroid hormone commonly used in IVF cycles. The actual benefit of Medrol™ is not established. It is used presumably to prevent the body from rejecting the transferred embryos.

SECTION F: INSTRUCTIONS FOR PREPARING AND INJECTING MEDICATIONS

To minimize contamination, wash your hands thoroughly with soap and water, place materials on a clean, dry surface, and do not allow the needle to touch any unclean surface.

If you have been prescribed Follistim AQ Pen and Cartridge or Gonal-f RF Pen:

Please refer to pre-printed instructions (with diagrams) provided by our nursing staff.

If you have been prescribed vials of Menopur, Repronex, or Bravelle:

Make sure you have all the necessary items listed below before you begin:

- Vials of actual medication (powder form) and liquid (diluent or water which serves only to dissolve the medication)
- Mixing needle, (3cc, 1 ½ inch syringe with needle attached), Short needle (subcutaneous needle length 1/2 inch) and the Long Needle (intramuscular needle length 1 or 1 ½ inch)
- Alcohol swabs, gauze, and sharp container (puncture-proof container with sealable lid suitable for disposal of used syringes)

Reconstituting vials:

1. Flip the protective plastic cap off the vials and wipe the rubber stopper with alcohol. Do not touch the stoppers after they are wiped.
2. Twist cap clockwise to insure needle is secure on syringe so that no leakage of fluid will occur - then, carefully remove the needle cover
3. Draw air into the syringe by slowly pulling back the plunger to the **1-cc** mark.
4. Carefully insert the needle through the rubber stopper into the vial with the liquid and gently inject the air into the vial. Without removing the needle, turn the vial upside down and withdraw **1 cc** into the syringe, making sure the tip of the needle remains in the water. Then remove the needle from the vial.
5. Introduce needle into the vial, depress the plunger and slowly inject the liquid along an inside wall of the vial of medication. If bubbles appear, wait a few moments for the bubbles to settle. If the mixture is not clear and colorless (rare), **do not inject** and call your physician.
6. If your dose requires more than one vial, draw up the mixture back into the syringe. Be sure to keep the tip of the needle within the mixture while withdrawing, and then inject the contents of the syringe into the next vial of powder. Repeat process until your recommended dose is completely mixed.
7. Recap the needle.

Preparing for injection itself:

1. Remove the mixing needle by twisting the cap counterclockwise. Replace the mixing needle with a short needle, twist clockwise, then pull off the needle cover.
2. Turn the needle so that it is pointing up and tap the syringe. After the bubbles float to the top, slightly depress the plunger until a drop or two of liquid is released from the tip of the needle. Next, recap the needle while you prepare the injection site.

SECTION G: PREPARING FOR YOUR EGG RETRIEVAL

*(** You will receive a detailed instruction sheet from our office before your egg retrieval. follow the instructions on that sheet exactly.)*

The night of your human chorionic gonadotropin (HCG) injection:

- **hCG** is the last hormone injected before egg retrieval. It is packaged under the names: **hCG**, **Pregnyl™**, **Profasi™**, **Novarel™** or **Ovidrel™**. On the night of the hCG injection, mix the HCG as follows: add 1cc diluent to the vial of powder (10,000 units), allow powder to dissolve, then withdraw the entire 1 cc (all 10,000units) into the syringe. Switch to the shorter 1 inch 22 gauge needle and inject into the buttocks intramuscularly (as previously instructed).
- You will be instructed in writing as well as verbally regarding the date and time to take the hCG injection as well as other medication instructions.

The night before egg retrieval:

- Start **Doxycycline** 100 mg (take first tablet between 9 pm and 11 pm). Take one tablet every 12 hours (8 tablets total) until the tablets are gone.
- **Do not eat or drink anything after midnight** (until after the retrieval).

The morning of the egg retrieval:

- You will be instructed in writing as well as verbally regarding the date and time of the egg retrieval. You **must** arrive at our office promptly 30 minutes before the scheduled time of retrieval.
- Wear loose fitting clothes, do not eat or drink anything that morning and do not douche.
- Consent forms must have been signed by this time by both the patient and her male partner for all associated procedures (and for cryopreservation of embryos if needed). **As such, your partner must be present to sign.**

- An anesthesiologist will explain anesthesia-related issues and administer the anesthetic (**Note: before undergoing anesthesia, you MUST alert the anesthesiologist and your doctor about any health problems, even if you have already discussed these in consultation with your physician. Please make sure you notify us of any allergies to soybeans or eggs or any heart valve (e.g. murmurs) or respiratory problems, such as asthma.**)
- A semen specimen will be collected after the egg retrieval is completed. The lab should be informed in advance if you anticipate any problems with semen collection. **As such, your partner must be present** (unless donor semen is being used or the use of a frozen semen or testicular tissue sample from the partner has been pre-arranged and consented for by both partners).
- After recovering for approximately 60 minutes after the retrieval, you will be discharged home. You **must** be accompanied home.
- Take your morning **Doxycycline** tablet with food and a glass of liquid or juice when you return home.
- Full payment (by check, cash or credit cards) for **ALL IVF services MUST BE RECEIVED NO LATER THAN THE DAY OF the hCG injection. Regardless of insurance coverage, all patients must pay the \$500 anesthesia fee (bring cash or a check made out to Dr. Steven Alfond) on the day of service.** You may contact your carrier for possible reimbursement. Be sure to request a HICFA form if you will be submitting a bill to your insurance carrier.

Note: **CRYOPRESERVATION (FREEZING) OF EMBRYOS** is an option available to couples with “extra” embryos (i.e. more embryos than will be transferred to the uterus). If your physician believes cryopreservation is appropriate for you, embryos will be cryopreserved on the third day after the egg retrieval. Your physician will discuss with you his or her recommendations regarding whether or not to cryopreserve embryos and the number of embryos to cryopreserve. Although there are no arbitrary guidelines as to who should or should not cryopreserve embryos, we recommend that women under 36 years of age with 7 or more embryos strongly consider cryopreservation. All patients/couples who decide to cryopreserve embryos for future use **must sign the appropriate consent forms and make full payment for cryopreservation (not covered by insurance) prior** to exiting the center on the day of the egg retrieval. If for any reason freezing of embryos cannot be performed, cryopreservation fees will be refunded to you.

SECTION H: FOR EGG DONORS--PREPARING FOR YOUR EGG RETRIEVAL

*(** You will receive a detailed instruction sheet from our office before your egg retrieval. follow the instructions on that sheet exactly.)*

The night of your human chorionic gonadotropin (HCG) injection

- **hCG** is the last hormone injected before egg retrieval. It is packaged under the names: **hCG, Pregnyl™, Profasi™, Novarel™** or **Ovidrel™**. On the night of the hCG injection, mix the HCG as follows: add 1cc diluent to the vial of powder (10,000 units), allow powder to dissolve, then withdraw the entire 1 cc (all 10,000units) into the syringe. Switch to the shorter 1 inch 22 gauge needle and inject into the buttocks intramuscularly (as previously instructed).
- You will be instructed in writing as well as verbally regarding the date and time to take the hCG injection as well as other medication instructions.

The night before egg retrieval

- Start **Doxycycline** 100 mg (take first tablet between 9 pm and 11 pm). Take one tablet every 12 hours (8 tablets total) until the tablets are gone.
- **Do not eat or drink anything after midnight** (until after the retrieval).

The morning of the egg retrieval

- You will be instructed in writing as well as verbally regarding the date and time of the egg retrieval. You **must** arrive at our office promptly 30 minutes before the scheduled time of retrieval.
- Wear loose fitting clothes, do not eat or drink anything that morning and do not douche.
- Consent forms must have been completed by this time.
- An anesthesiologist will explain anesthesia-related issues and administer the anesthetic (**Note: before undergoing anesthesia, you MUST alert the anesthesiologist and your doctor about any health problems, even if you have already discussed these in consultation with your physician. Please make sure you notify us of any allergies to soybeans or eggs or any heart valve (e.g. murmurs) or respiratory problems, such as asthma.**)
- After recovering for approximately 60minutes after the retrieval, you will be discharged home. You **must** be accompanied home.
- Take your morning **Doxycycline** tablet with food and a glass of liquid or juice when you return home.

SECTION I: INSTRUCTIONS FOR AFTER THE EGG RETRIEVAL AND PREPARATION FOR EMBRYO TRANSFER

*(** Before leaving our office following your egg retrieval, you will receive a detailed instruction sheet regarding preparation for your embryo transfer. follow the instructions on that sheet exactly.)*

The night of the egg retrieval :

- Continue the **Doxycycline** tablets and begin the first of 8 **Medrol** tablets (take 1 tablet every 12 hours until all the pills have been taken).
- Place one 100 mg **Progesterone suppository, Endometrin or Crinone suppository (refer to the specific instructions provided to you)** in the vagina at bedtime. **All patients have refills on medications. Contact the pharmacy immediately if refills are required. Do not discontinue your suppository treatments until instructed otherwise.**
- You are advised to rest at home the entire day of your retrieval. You may resume normal, but not strenuous, activities the following day (even returning to work if heavy exertion is not required). Do not stay alone for at least 24 hours. You may take Tylenol™ or mild discomfort.
- ***Notify the office immediately if you experience fever, severe abdominal or pelvic pain, shortness of breath or heavy vaginal bleeding.***

The day following the egg retrieval:

- Start your **Progesterone in oil* injections**, 1cc (50 mg) intramuscularly each morning (**note:** unless your physician has prescribed an alternative form of progesterone, such as Crinone or Endometrin)
- Place one 100 mg **Progesterone suppository, Endometrin or Crinone suppository (refer to the specific instructions provided to you)** in the vagina at bedtime. **All patients have refills on medications. Contact the pharmacy immediately if refills are required. Do not discontinue your suppository treatments until instructed otherwise.**
- You will receive a telephone call the day after the retrieval informing you of the number of embryos formed (i.e. **fertilization**). On the day prior to embryo transfer, the lab will inform you of the scheduled time of transfer.

On the day of the embryo transfer (typically 4-5 days after the retrieval):

- Arrive at the office at exactly the scheduled time. **Drink three 8-oz glasses of water prior to arrival and another two glasses upon arrival.** Drink until you feel you need to void (do NOT void, however, until after the transfer is completed).
 - Arrange a comfortable car ride home and plan to remain in bed, an easy chair or sofa for the next 2 days (you may get up to eat and use the bathroom).
- J. Preparation for Embryo Transfer (for patients undergoing transfer of frozen embryos or for recipients of donated eggs)**

You will be provided with a detailed protocol regarding on which days and dates to use Estrogen (Estrace) and Progesterone supplements as well as other medications listed below.

Once the eggs are retrieved from the donor, you will follow the instructions listed below – the specified days and dates to use these medications will be indicated by the instruction sheet provided to you during your cycle.

- Place one 100 mg **Progesterone suppository, Endometrin or Crinone suppository (refer to the specific instructions provided to you)** in the vagina at bedtime. All patients have refills on medications. Contact the pharmacy immediately if refills are required. **Do not discontinue your suppository treatments until instructed otherwise.**
- Use **Progesterone in oil* injections**, 1cc (50 mg) intramuscularly each morning (**note:** unless your physician has prescribed an alternative form of progesterone, such as Crinone or Endometrin)
- Take one pill of Estrace 2 mg twice per day (**do not discontinue use of these pills until instructed otherwise**)
- Take one pill of Medrol 8 mg twice per day for four days (8 pills total)

Your embryo transfer will be scheduled to occur between 3 and 5 days after the eggs are retrieved. On the day of the embryo transfer,

- **Drink three 8-oz glasses of water prior to arrival and another two glasses upon arrival.** Drink until you feel a strong need to void (do NOT void, however, until after the transfer is completed)
- Arrange a comfortable car ride home and plan to remain in bed, an easy chair or sofa for the next 2 days (you may get up to eat and use the bathroom)

- Do not place anything into the vagina (including tampons, intercourse, douches) except the progesterone suppositories
- After two days of rest, you may resume normal activity but please refrain from heavy lifting (> 10 lb), overheating (e.g. from outside work or exercise), or highly strenuous activities (you may generally return to work).
- **Do not discontinue use of any of the medications listed above until instructed otherwise (call the pharmacy immediately if refills are required).**

SECTION K: THE DAY OF THE EMBRYO TRANSFER

- Arrive at the office at exactly the scheduled time.
- Drink three 8-oz glasses of water prior to arrival and another two glasses upon arrival. Drink until you feel you need to void (do NOT void, however, until after the transfer is completed).
- On this day, the physician and embryologist will meet with you to discuss the number of embryos available for transfer and counsel you on the grades of these embryos. You will also discuss recommendations regarding the number of embryos to transfer and the risks of multiple gestation as well as your beliefs regarding fetal reduction.
- The risks, benefits and costs of embryo cryopreservation will be discussed with you as well if you have extra embryos appropriate for cryopreservation.
- Both partners should be present of the day of the embryo transfer.

SECTION L: INSTRUCTIONS FOR AFTER A FRESH EMBRYO TRANSFER

- Remain in bed, an easy chair or sofa for the next 2 days (you may get up to eat and use the bathroom). Remain calm and relaxed.
- Do not place anything into the vagina (including tampons, intercourse, or douche) *except* the Progesterone vaginal suppositories until the pregnancy test (see time and date listed below).
- You may notice some seepage of fluid from the vagina after transfer. This is the media used to cleanse the vagina prior to transferring the embryos and is of no concern.
- After 2 days of rest, you may resume normal activity as long as you refrain from lifting (> 10 lb), heavy exertion or strenuous activities. You may in most cases return to work.

You must continue to take your Progesterone supplementation. You have been prescribed one of the forms of Progesterone listed below:

- **Endometrin™ (2 to 3 times per day) or Crinone™** (1 to 2 times per day) are special progesterone vaginal capsules or gel inserted into the vagina.
- **Intramuscular injections:** Progesterone in oil (1 cc) might be prescribed intramuscularly every morning starting the day following the egg retrieval.
- **Intravaginal suppositories** might be prescribed vaginally before bedtime, starting the night of the egg retrieval.
- All patients have refills on medications. Contact the pharmacy immediately if refills are required.
- **Do not discontinue your progesterone treatments until instructed otherwise.**
- Please continue taking the Doxycycline and Medrol tablets one tablet twice a day of each for four days total until all the pills have been taken (in some cases, all the pills have already been used prior to the embryo transfer. No further pills are required.)
- A **pregnancy test** in our office will be scheduled for you approximately 12 days after the embryo transfer. Please come in between 7:15am - 8:30am on the scheduled day for the blood pregnancy test. Do NOT use a home pregnancy test as it may be inaccurate.

SECTION M: INSTRUCTIONS FOR AFTER A FROZEN EMBRYO TRANSFER

- Remain in bed, an easy chair or sofa for the next 2 days (you may get up to eat and use the bathroom). Remain calm and relaxed.
- Do not place anything into the vagina (including tampons, intercourse, or douche) *except* the Progesterone vaginal suppositories until the pregnancy test (see time and date listed below).
- You may notice some seepage of fluid from the vagina after transfer. This is the media used to cleanse the vagina prior to transferring the embryos and is of no concern.
- After 2 days of rest, you may resume normal activity as long as you refrain from lifting (> 10 lb), heavy exertion or strenuous activities. You may in most cases return to work.
- **Continue Estrace 2mg tablets twice a day** until instructed otherwise.

- **You must continue to take your Progesterone** supplementation. You have been prescribed one of the forms of Progesterone listed below:
- **Endometrin™ (2 to 3 times per day) or Crinone™ (1 to 2 times per day)** are special progesterone vaginal capsules or gel inserted into the vagina.
- **Intramuscular injections:** Progesterone in oil (1 cc) might be prescribed intramuscularly every morning starting the day following the egg retrieval.
- **Intravaginal suppositories** might be prescribed vaginally before bedtime, starting the night of the egg retrieval.
- All patients have refills on medications. Contact the pharmacy immediately if refills are required.
- **Do not discontinue your progesterone treatments until instructed otherwise.**
- Please continue taking the Doxycycline and Medrol tablets one tablet twice a day of each for four days total until all the pills have been taken (in some cases, all the pills have already been used prior to the embryo transfer. No further pills are required.)
- A **pregnancy test** in our office will be scheduled for you approximately 12 days after the embryo transfer. Please come in between 7:15am - 8:30am on the scheduled day for the blood pregnancy test. Do NOT use a home pregnancy test as it may be inaccurate.

SECTION N: SEMEN COLLECTION AND HANDLING INSTRUCTIONS

This information is for the partner of patients undergoing IVF or insemination procedures. You will be informed on the morning of the egg retrieval when to provide a semen specimen. The time for obtaining a specimen is dependent upon the quality and maturity of the oocytes retrieved. **If you anticipate difficulties producing semen samples, you must notify the laboratory in advance so that alternative collection methods can be arranged. If you are concerned that you might feel too anxious to produce a sample on the day of the egg retrieval, please let us know as soon as possible so that we might freeze a vial of sperm prior to egg retrieval.** In some instances, you may be required to produce additional semen samples on the same day or even the following day if immature eggs reach maturity overnight and require fresh semen for fertilization to occur. Please make yourself available in case the need arises.

Specimen Collection

1. Abstain from intercourse or masturbation for 2-4 days prior to egg retrieval.
2. The specimen should be collected by manual masturbation, without the use of condoms, intercourse or oral sex (saliva has detrimental effects on spermatozoa). If a lubricant is needed, use mineral oil (from any pharmacy.) If masturbation is not possible, a special semen collection condom from the laboratory can be purchased. Collect the entire ejaculate.
3. The specimen should be collected in a sterile specimen container available from the lab or from your physician or pharmacy (sometimes referred to as a sterile urine cup).
4. To prevent contamination, open the container only when ready to collect the specimen. Avoid touching the inside of the container before and after collection. If the specimen is collected with a special condom, please remove it carefully and place it in the semen container.
5. Label the container with your name, date, and time collected.
6. If the specimen is collected at home, the specimen should not be subjected to extreme heat or cold, or to direct sunlight. During the winter, we recommend that the container be carried in an inside pocket close to your body.
7. If the specimen is collected at home, we must receive it in the laboratory within 90 minutes of collection.

Section O: FREQUENTLY ASKED QUESTIONS

What is involved in starting an IVF cycle?

After having been evaluated by your physician and determined to be eligible for IVF, the following appointments and procedures are scheduled:

- IVF orientation and injection class. These are scheduled with one of the IVF nurse coordinators. During these classes, the upcoming IVF cycle is reviewed in detail. If you have not used injectable medications before, you will be instructed how to do so.
- Saline hysterosonogram and blood tests (previously described). Both partners require blood testing.

When do I call to start my IVF cycle?

“Day 1” of your menstrual cycle is considered the first day of menses. When the flow begins after 9:00 pm, the *following* day is considered “day 1.” You should be familiar with your medications and have all of your prescriptions filled before your cycle starts. On day 1, call the coordinator and let her know that you started your cycle. If your period starts after 4:00 pm, call the next day after 9:00 am.

What is the success rate with IVF?

Numerous factors influence success rates. These include the age of the woman, the indications for the procedure, the sensitivity of the ovaries, prior reproductive history, medical and surgical history, and the health of the sperm. As centers around the city and country have significant variability in who they choose to treat with IVF, success rates are relatively non-interpretable. Your physician should review the expected chances of success in **your specific situation**.

When I am finally instructed to start my medications, what time do I do so?

Medications are generally administered in the evening unless otherwise instructed. Sometimes you may be instructed to use medications in the morning as well. The *typical* times at which the following medications are given are as follows (note - *not all patients use all of the listed medications*):

- **Lupron:** take each evening between 7 pm and 9 pm.
- **Gonadotropins** (e.g. Gonal-F vials or pen, Follistim vials or pen, Repronex, Menopur, or Bravelle): take each evening between 7 pm and 9 pm.
- **Human chorionic gonadotropin** (generic hCG, Novarel, Pregnyl, Profasi, or Ovidrel): take **exactly** at the time specified.
- **Progesterone in oil or progesterone suppositories or Endometrin or Crinone:** specific instructions will be provided to you regarding the timing and dosing of these medications.

How do I mix the Gonadotropins? (please refer to *injection instruction section*)

Medications often come in a vial form or in an injection pen. If in the form of a vial of powder, please understand that the active drug is the powder. The liquid (or diluent) that is packaged with the medication serves only to dissolve the medication so that it can be injected. If you are instructed to use 1, 2, or 3 vials of medication, add 1 ml (or 1 cc) of diluent to the first powder, gently swirl it to allow it to dissolve, then transfer the whole volume of that vial to the next powder (and so on). If 4 or more vials are to be used, use 1.5 - 2 ml cc of diluent. Specific, detailed injection instructions are included in this manual.

Why was I given two needles for one medication?

One needle (the longer one) is used to mix the medications and the other needle (short one) is used to give the injection.

What is the difference between IM and Subcutaneous injections and which needle do I use for each?

An IM (intramuscular) injection involves injecting the medication into deep muscle tissue using a long (1 to 1 ½ inch) injection needle. A subcutaneous injection involves injecting the medication into the fatty tissue directly beneath the skin using a short (1/2 inch) injection needle.

If I am going out for the evening, can I inject myself *before* I leave for the evening?

It is recommended to give your injection at the same time each day. A 1 hr window of time prior to, or after, the previous night's dose is acceptable. However, the medications should be given in the recommended time intervals listed in this manual.

How many days will I be on medication?

Ovarian stimulation medications are taken for approximately 7-11 days. We can not predict early in the cycle exactly how many days of stimulation will be needed.

How much of the hCG do I inject?

The hCG injection allows the eggs to undergo adequate maturation prior to egg retrieval. It is critical that the injection is given at the exact time instructed. The dose is 10,000 IU unless otherwise specified. Read the label on the vial and confirm it reads 10,000 IU, then dissolve the powder in 1cc of diluent and inject (refer to medication instructions section of this manual).

Why was I sent one bottle of Lupron when I need to use it for 2 weeks?

Lupron comes in a multi-dose vial. Although the vial does not look full, there is enough medication in one vial for at least two weeks of daily dosing.

Why was I given an extra syringe for my Lupron?

Some patients use Lupron for longer than 2 weeks. Additional syringes may be required.

How much Lupron do I draw up in the syringe?

The dose you are given can be drawn up according to the following:

0.05 cc = 0.05ml = 5 units

0.1 cc = 0.1ml = 10 units.

0.2 cc = 0.2ml = 20 units.

What size should the follicles be when they are ready?

Generally, the diameter of a follicle that normally contains a mature egg is 16-20 mm.

Why do I need to take Progesterone?

Progesterone is a natural hormone that is given intramuscularly and/or by a form of vaginal suppository starting on the evening of the egg retrieval. It helps prepare the lining of the uterus to receive the embryo for implantation.

When do I know if I am pregnant? If I get a period, do I still need a pregnancy test?

A blood pregnancy test (hCG level) is done approximately 12 days after the embryo transfer. A home pregnancy test is not as accurate and often misleading.

What happens to the embryos in my uterus if I do not become pregnant?

The eggs and embryos are microscopic. If pregnancy does not occur, they are reabsorbed by the body.

Should I be taking vitamins?

A daily multivitamin containing folic acid 0.4 mg is recommended when you are trying to conceive and throughout your pregnancy.

What time are patients monitored during the week/weekend?

7:30am-9:30am Monday-Friday; 8:30am-10:30am on weekends. Note: Dr. Stein, Dr. Keltz or Dr. Lederman will perform the morning sonograms depending on the day of the week your visit falls on.

My partner may have problems producing a semen sample on the day of retrieval.

What should I do?

Some men do have anxiety that prevents them from producing a sample on the day of the egg retrieval. If you anticipate a potential problem, it is imperative that your partner arrange with the IVF laboratory to freeze a sample ahead of time (at least 4-5 days prior to the retrieval).

When will the embryo transfer occur and how many embryos will be transferred into my uterus?

The embryo transfer is generally performed three to five days after the egg retrieval. You will need to be at bed rest for two days after the transfer (see section on embryo transfer). The number of embryos to transfer depends on your age, reproductive history and personal philosophy regarding multiple pregnancy. The American Society of Reproductive Medicine provides general guidelines for the number of embryos to

transfer. These guidelines are largely age-based. Your physician's recommendations on the number of embryos to transfer are based on the desire to optimize pregnancy rates and minimize the chances of multiple (>2) embryos implanting. Your feelings regarding multi-fetal pregnancy reduction will also be addressed. The physician reserves the right to refuse to transfer more embryos than he feels is medically-advisable.

Section P: The Risks Associated With the IVF Process

The risks involved with IVF are overall low. The following discussion is a modification of a document issued by the American Society for Reproductive Medicine (ASRM). Please understand that new data and/or modifications of current data regarding the risks associated with IVF might be introduced at any time. **Please refer to additional information provided by our office on the side effects and risks of the medications used in the IVF process.**

I. Medication Risks

Injection site reactions - Injectable medications may cause redness, bruising and discomfort at or around the actual injection sites.

Ovarian Hyperstimulation Syndrome – Injections of gonadotropins stimulate follicles to develop within the ovaries. At times, stimulation may result in significant ovarian enlargement, pelvic discomfort, and leakage of fluid from the bloodstream and ovaries into the pelvic, abdominal and chest cavities. Such severe symptoms are rare; they occur in less than 1% of patients. When they do occur, however, patients are at risk of dehydration, blood clotting disorders, difficulty breathing and kidney dysfunction. Hospitalization may be required to provide intravenous hydration, blood thinning medications and supportive care until the symptoms resolve (usually within several days if pregnancy does not occur or a few weeks if pregnancy does occur). Mild symptoms are far more common and include bloating and general discomfort. It is important to realize that while frequent blood tests and ultrasound examinations greatly reduce the risks of severe ovarian hyperstimulation, not all cases can be predicted or prevented. It is necessary at times to cancel an IVF cycle in order to prevent severe hyperstimulation.

Ovarian Cancer - Studies on the risks of fertility medications on future ovarian cancer risk are conflicting. Most recent, well-designed studies have failed to show any increased ovarian cancer risk with fertility medications. However, further research is required to provide a definitive answer as to the actual risks to the ovaries of fertility medications.

II. Procedure-related Risks

Egg retrieval involves the ultrasound-guided introduction of a long, thin needle through the vaginal wall into the ovaries. This procedure is performed under intravenous anesthesia. Once the needle enters the ovaries, the fluid from the follicles is aspirated and the eggs are collected into sterile test tubes. Local vaginal and cervical bleeding is common but rarely of any clinical concern. Damage to nearby structures such as bowel, bladder and major blood vessels are very rare. Pelvic infections are also rare.

III. Pregnancy-related Complications

Multiple Pregnancy - Multiple pregnancies (e.g. twins, triplets or more) occur in up 1/3 of IVF cycles. The majority of multiple pregnancies are twins; however, approximately 10% of pregnancies are complicated with triplets or more. Multiple pregnancies usually arise from more than one embryo implanting in the uterus (*dizygotic*, or fraternal twinning). However, IVF is associated with an increased risk of embryo splitting, resulting in *monozygotic*, or identical twinning. Multiple pregnancies are associated with an increased risk of premature birth, which may result in fetal respiratory, neurological, growth and gastrointestinal complications. Multiple pregnancies are also more likely to require cesarean deliveries and are associated with an increased frequency of hypertension, diabetes and hemorrhage during pregnancy. As such, your physician will discuss with you an appropriate number of embryos to transfer. This number depends on a variety of factors including the age of the mother, the quality of the embryos, and other medical and personal factors. Inherent in the decision of how many embryos to transfer is the couple's attitudes regarding **multifetal pregnancy reduction**, a process by which multiple fetuses can be terminated *in utero* using a long needle and potassium chloride injections. This procedure is considered when the risks of severe prematurity from carrying multiple

fetuses are significant. Fetal reduction may reduce the risks and allow the remaining 1 or 2 fetuses to reach a healthy state of maturity prior to delivery. Multifetal reduction may itself result in the loss of all the fetuses in 10-15% of cases. We work with a team of physicians with expertise in fetal reduction should the need arise to consider this therapy. If you believe that you would not consider fetal reduction as an option in cases of high-order multiple pregnancy, it is imperative that you discuss your feelings with your physician prior to the embryo transfer.

Birth Defects - While many studies to date have *not demonstrated* a significant increase in birth defects in children conceived with fertility medications or through in vitro fertilization, some studies do suggest a small increase in the frequency of certain congenital defects in babies conceived through IVF. Growth of the bladder outside the body (*Cloacal Bladder Exstrophy Epispadia Complex*) and other defects in the normal development of the urogenital tract have been reported to be increased yet still very rare in babies conceived through IVF. Another very rare disorder reported to be increased in children conceived through IVF is *Beckwith-Wiedemann Syndrome*, an overgrowth disorder due to defects in the genes controlling the growth of various organs in the body. Children with this disorder are usually born prematurely but are large in size. Some have an enlarged tongue, defects in their abdominal musculature making them more susceptible to the formation of hernias, enlarged hearts and other heart defects, and an increased risk of developing rare tumors of the kidneys (Wilm's Tumors) and liver (hepatoblastomas). Studies also suggest that IVF babies, even when considering single babies (i.e. non-multiple births), may be at a significantly higher risk of being born at birth weights < 2500 grams. The risk of premature delivery appears to be increased as well.

Despite the reported abnormalities listed above, it is important to realize that the vast majority of babies conceived through the IVF process appear to be normal and healthy. Further studies are needed to better determine the true risks to the fetus associated with the IVF process and to determine if such risks are due to the IVF process or solely a reflection of the underlying conditions that caused the infertility in the couple in the first place.