

ATLANTA REPRODUCTIVE HEALTH CENTRE

IVF PATIENT HANDBOOK

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INNOVATIVE SOLUTIONS FOR REPRODUCTIVE PROBLEMS

**NATIONALLY RECOGNIZED EXPERTISE IN
REPRODUCTIVE HEALTHCARE AND TREATMENT
FOR ENDOMETRIOSIS**

**EXCELLENT RESULTS FROM MEDICAL SCIENCE'S
MOST ADVANCED FERTILITY TECHNOLOGIES**

**PERSONALIZED, IN-DEPTH PATIENT CARE FROM
COMPASSIONATE, CONCERNED MEDICAL STAFF**

**STATE-OF-THE-ART DIAGNOSIS AND AGGRESSIVE
TREATMENT PLANS FOR OPTIMAL OUTCOMES**

**COMPREHENSIVE ANALYSIS TO DIAGNOSE AND
PREVENT REPEATED PREGNANCY LOSS**

**SUCCESSFUL HISTORY REVERSING TUBAL
STERILIZATION**

PATIENT CENTERED CARE

We understand that no two medical problems or patients are alike, and treatments must be individualized to every patient's needs.

That's why the medical staff of the **ATLANTA REPRODUCTIVE HEALTH CENTRE** is committed to finding medical solutions for each person who seeks care from us.

We never attempt to fit an individual into a generic treatment mold.

To provide the personalized quality care for which we've become nationally recognized, we spend hours with our patients and their partners to First, identify and diagnose the problem;

Second, develop a partnership with each patient and her support team which may include her husband, another relative or friend and her referring physician;

Third, outline medical or surgical options;

Fourth, initiate a cost-effective treatment plan that combines the highest quality of care with the best possible outcome.

CONFIDENTIALITY

We work hard to protect our patients' privacy. We do not release medical records or any portion of them without written authorization from the patient.

OFFICE HOURS

Our office is open Monday through Friday from 7:30 a.m. to 4:30 p.m. We try to be flexible for situations when it maybe necessary to see patients outside of regular office hours. Saturday and Sunday morning appointments are available for ultrasound monitoring, insemination, egg retrievals and pre-embryo transfers.

OPEN COMMUNICATION

The best patient is a well-informed one.

We value an open and ethical relationship with each patient who, we believe, is entitled to complete knowledge about her reproductive health.

In an environment of trust and mutual respect, our patients and their partners feel free to ask questions at any time.

We promise to answer all the questions asked - and even those that aren't.

It's the only way to build partnerships with every patient, her spouse and her referring physician. As a team, we all work together to achieve the best possible outcome.

INTERNET ACCESS

All visitors are welcome at our comprehensive Internet website, <http://www.ivf.com> where information is readily available on the medical practice and reproductive health issues.

The website offers menus that include a revised copy of Dr. Perloe's book, ***Miracle Babies and Other Happy Endings for Couples with Fertility Problems***, and offers detailed reports about reproductive medicine from many sources.

Internet visitors can contact Dr. Perloe or Dr. Sills, sign or peruse the guestbook, ask a question, tour the ARHC multimedia gallery or join a discussion in the chatroom.

FINANCIAL MATTERS

Most health insurers do not cover infertility. Conversely, many insurers will provide coverage for some gynecological diagnoses. However, we do not accept assignment for office visit charges unless we have a contract with your insurer or your health insurer's written authorization or referral for your appointment. Payment for medical, lab and diagnostic services provided in the office is due at the time of service. If we have a managed care contract with your insurer, you are expected to pay for the deductible and/or co-pay at the time of service. To keep patient accounts current, we accept MasterCard, Visa and Discover cards or we will verify your personal check. Depending on your diagnosis, you may be able to obtain some reimbursement for your care. Your receipt for payment will contain the standard diagnosis, medical and surgical treatment codes used by the majority of health insurers.

YOUR APPOINTMENT

Step 1: Call (404) 265-3662. Our staff conducts a preliminary telephone interview to assure that we are adequately prepared for the appointment. If necessary for insurance coverage, a referral authorization must be signed and in our office before an appointment can be scheduled. We attempt to see patients with urgent medical or surgical conditions as quickly as possible.

Step 2: Once the appointment is scheduled, our staff sends the patient a Welcome Packet with detailed information about ATLANTA REPRODUCTIVE HEALTH CENTRE. The packet also includes authorizations for release of medical information, and a new patient questionnaire for both partners to complete and bring the initial appointment.

Step 3: Before the appointment, the Patient must take the authorization for release of medical information to her prior physician(s) and hospital(s) and **obtain copies** of relevant medical records. In addition, **patients should obtain** copies of surgical notes and videotapes, actual (not copies, not reports) x-ray films (must be obtained from the hospital), copies of laboratory tests, and her health insurance manual. Do not rely on your physician mailing or faxing your medical records or sending your X-ray films. Obtaining films and medical records is **your** responsibility. Failure to bring these at the time of your visit may delay your treatment.

Infertility evaluations require a spouse to sign a separate authorization for release of medical information to obtain copies of his records and semen analysis reports.

All medical information should be delivered to ATLANTA REPRODUCTIVE HEALTH CENTER for our physicians to review before your first appointment.

For a comprehensive fertility assessment, both partners should be present at the first appointment. This evaluation usually requires two hours. The cost for an initial office visit depends on the type of testing necessary to establish a diagnosis for each couple, and is generally in the range of \$200 to as high as \$500. If you are not prepared for this expense at the time of your visit, you should let us know immediately so that additional testing can be postponed.

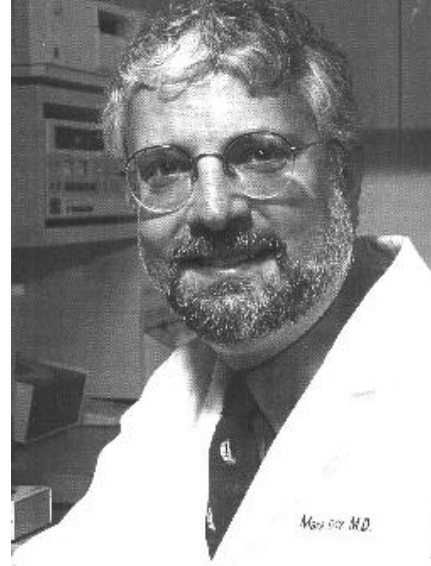
DR. MARK PERLOE

Noted for the individualized and in-depth attention he gives each patient, Dr. Mark Perloe has helped hundreds of couples struggling with infertility realize their dream of having children.

As director of reproductive endocrinology, infertility and in vitro fertilization at Georgia Baptist Medical Center, Dr. Perloe has above average success rates in achieving pregnancies through advanced reproductive technologies as well as expertise in treating recurrent pregnancy loss, endometriosis, menstrual disorders, fibroids, and endocrine and other reproductive health problems. He also has extensive experience using the latest microsurgical techniques for reversing tubal sterilization.

A clinical assistant professor in obstetrics and gynecology at the Medical College of Georgia, Dr. Perloe completed his fellowship in reproductive endocrinology and infertility at the University of Minnesota.

He holds an MD degree from the Pennsylvania State University, Hershey Medical Center and served his residency in obstetrics and gynecology at the University of Wisconsin



Dr. Perloe is board certified. He has conducted and published research in medical journals **including Obstetrics & Gynecology** and at national conferences. In 1986, he co-authored *Miracle Babies and Other Happy Endings for Couples with Fertility Problems*, a revised copy of which is on his website, <http://www.ivf.com>.

He has served as consultant and task force member to the Women's Initiative of the American International Health Association and was active in establishing the first approved endoscopy training center in the former Soviet Union at the Russian National Institute of Women's Health in St. Petersburg. He is the managing editor of the **Endozone**, an online medical journal for physicians on endometriosis. He also serves as a medical consultant for Sigma-tau pharmaceuticals, Zeneca pharmaceuticals, and Betterhealth.com. Dr. Perloe is a member of the American Society of Reproductive Medicine, American Association of Gynecologic Laparoscopists, the International Society of Pelvic Pain, and several state and local medical associations. He has also served on the advisory board for the Atlanta chapter of Resolve, and presently serves on the national advisory boards of INCIID, OBGYN.net, the Endometriosis Association and PCOS Support.

He is married, has two children and enjoys playing with computers, sailing and traveling.

DR. E. SCOTT SILLS



Dr. Sills earned his medical degree from University of Tennessee School of Medicine and holds a bachelor's degree from Vanderbilt University. His residency training in obstetrics and gynecology was at the New York University's New York Downtown Hospital, after which he worked as an assistant attending physician in obstetrics and gynecology. Dr. Scott Sills joined the medical staff of the Atlanta Reproductive Health Centre in December 1998. A fellow of the Royal Society of Medicine in London, he completed a postdoctoral fellowship in reproductive endocrinology at Cornell University Medical Center in New York City, one of the nation's leading IVF centers.

While on the medical school faculty at Cornell, Dr. Sills investigated the role of recombinant human luteinizing hormone (r-hLH) in the ovary. He also characterized the relationship between embryo micromanipulation and identical twinning in humans, and analyzed ovarian estradiol response following various fertility treatments. In addition, Dr. Sills published the world's first study about women who obtained political asylum on the basis of forced sterilization, a report hailed by the United Nations High Commissioner for Refugees. His current clinical research interests are ovulation induction, polycystic ovary syndrome, and endometriosis.

Dr. Sills' work has appeared in numerous journals including the **American Journal of Reproductive Immunology**, **International Journal of Gynecology**, **Journal of the**

American Medical Association (JAMA), The Lancet, and New England Journal of Medicine. He has been invited to lecture at international medical meetings from Beijing to Copenhagen, and to talk with community and support groups such as local resolve chapters on, for example, "New approaches to infertility."

Dr. Sills is a member of the American Society of Reproductive Medicine, the Society of Laparoendoscopic Surgeons, the American Association of Gynecologic Laparoscopists, the American Medical Association, and the American Association for the Advancement of Science.

He and his wife have two children.

JENNIFER CLAIR, RNP,

Jennifer graduated from the University of Pennsylvania and received a Masters Degree in ambulatory women's health in 1988 from Boston College. She has worked as a reproductive endocrinology nurse practitioner and nurse coordinator since 1988. She has played a major role in the development of two new IVF centers.

Nationally certified in reproductive endocrinology as well as OB/GYN, she is a member of the American Society of Reproductive Medicine, the Association of Women's health, Obstetric and Neonatal Nurses, and the National Association of Nurse Practitioners in Reproductive Health. She serves on the advisory board for the Atlanta chapter of Resolve.

In addition to our physicians and nurse practitioner, our staff consists of registered nurses, patient representatives, nursing assistants, lab technicians, resident physicians and business office staff.

PAULA C MORTON, ARHC EMBRYOLOGIST

As ARHC embryologist, Paula C. Morton brings patients the latest scientific advances in IVF laboratory techniques.

She specializes in growing fertilized eggs in blastocyst cultures which allow up to five days (instead of one or two) before embryo transfer. A useful technique for women who produce a large number of eggs, this delay means implantation of fewer but healthier embryos, increasing the odds of pregnancy and reducing the risk of multiple births. She also has extensive experience in intracytoplasmic sperm injection (ICSI -- injecting a single sperm into an egg), and is developing methods for preimplantation genetic diagnosis to check embryos for Down's syndrome and other chromosomal abnormalities.

Since the mid-1980s, when assisted reproduction technology was in its scientific infancy, Morton has worked with national embryology leaders to help childless couples conceive in vitro. Beginning at Duke University's Division of Reproductive Endocrinology and Infertility in 1984, she first learned from and now collaborates with many of the outstanding reproductive laboratory scientists who have brought IVF to its current levels of success.

In 1987, she was named director of the In Vitro Fertilization Laboratory and Andrology Laboratory at the Southwest Fertility Center in Phoenix, Arizona. Moving to Atlanta in 1992, Morton was appointed senior embryologist at Reproductive Biology Associates where she teamed with Michael Tucker to successfully fertilize and implant thawed human eggs, a landmark in IVF history.

Her research has been published in major scientific journals including American Journal of Obstetrics and Gynecology, Human Reproduction, the Journal of Assisted Reproductive Genetics and Family Health International. She is a member of the American Society for Reproductive Medicine, the International Working Group on Preimplantation Genetics, the Society for Assisted Reproductive Technology, and the Reproductive Laboratory Technology Professional Group.

Morton holds a Bachelor of Science in zoology from University of North Carolina at Chapel Hill, and did graduate work in biology at Arizona State University where she taught developmental physiology and anatomy. She and her husband have two children.

ATLANTA REPRODUCTIVE HEALTH CENTRE

MISSION STATEMENT

ARHC IS DEDICATED TO DEPENDABLY:

- Provide high quality women's healthcare that focuses on the patient as partner.
- Address the specialized reproductive healthcare needs of women at each stage of life.
- Provide advanced, innovative, high value, infertility care in a nurturing environment, which focuses on family building, not technology.
- Recognize the importance of the healthcare team functioning as a coordinated unit that acknowledges the skills and values the contributions of each team member and provides an emotionally supportive work environment.

TO ACCOMPLISH THIS MISSION WE WILL ENGAGE IN ACTIVITIES DESIGNED TO:

- Increase awareness in the medical community of the unique services and medical expertise that ARHC provides.
- Become an innovator in the marketplace by providing high value to patients and managed care organizations.
- Invest in continuing medical education and professional development to enhance the capabilities of all personnel.
- Affirm patients access to high quality infertility services by serving as an advocate to educate payors, policy-makers and the public of its importance.
- Participate and support graduate medical education, medical outreach, and clinical research to enhance physician's knowledge and skills for the betterment of women's healthcare.

IN VITRO FERTILIZATION AND EMBRYO TRANSFER

PATIENT INFORMATION

INTRODUCTION

In vitro fertilization and embryo transfer (IVF-ET) is a procedure designed to enhance the likelihood of conception in couples for whom other fertility therapies have been unsuccessful or are not possible. It involves multiple steps resulting in the insemination and fertilization of oocytes (eggs) in the laboratory. The embryos created in this process are placed into the uterus for implantation. Each stage of the procedure has specific risks, which are outlined below.

BENEFIT OF THERAPY

IVF may provide a couple who has been otherwise unable to conceive with a chance to establish a pregnancy.

THE IVF-ET PROCEDURE AND ITS RISKS

Step 1: Ovarian Stimulation With Fertility Medications

The "superovulation" techniques used in IVF are designed to stimulate the ovaries to produce several eggs (oocytes) rather than the usual single egg as in a natural cycle. Multiple eggs, and therefore multiple embryos, increase the probability of conception when placed in the uterus for implantation.

The medications required to maximize egg production may include, but not limited to the following: Lupron (a Gonadotropin Releasing Hormone agonist), Follistim or Gonal-F (FSH, or follicle stimulating hormone), Humegon (combination of FSH and LH or luteinizing hormone), and Pregnyl or Profasi (hCG, human chorionic gonadotropin). Each is administered by injection only. Lupron, Follistim and Gonal-F are given subcutaneously (beneath the skin), and the others are intramuscular injections (into the muscle). Risks associated with these routes of administration include, but are not limited to:

1. tenderness at the injection site
2. infection at the injection site
3. hematoma or bruising at the injection site

Risks associated with the medications themselves include, but are not limited to:

1. allergic reactions
2. hyperstimulation of the ovaries (mild, moderate, or severe)
3. failure of the ovary to respond
4. cancellation of the treatment cycle

There are situations that can occur during a stimulation that may require cancellation of the cycle and stopping treatment for a period of time. These situations usually occur because the patient has produced too many or too few eggs with the dose of medication selected. Although we realize that this can be a big disappointment, at times it is necessary to discontinue administering the medications to avoid the possibility of a prolonged hospitalization due to ovarian hyperstimulation syndrome. If canceling the cycle becomes necessary, you will be told to stop your injections. No hCG injection will be given. You will be asked to schedule an appointment with your physician to make decisions for future treatment cycles.

During the use of ovulation induction medications, the ovaries are pushed to produce more than one egg to the point of maturity. Consequently, hormone levels of estrogen and progesterone reach higher than normal values. When the estrogen level becomes mildly to moderately elevated, side effects that may be experienced include, but are not limited to:

1. fluid retention with slight, transient weight gain
2. nausea
3. diarrhea
4. pelvic discomfort due to enlarged, cystic ovaries
5. breast tenderness
6. mood swings
7. headache
8. fatigue

If the estrogen level rises excessively and hCG is administered to trigger final maturation of the eggs and ovulation, the following more serious complications may result from severe ovarian hyperstimulation syndrome:

1. excessive fluid retention with fluid in the abdomen and/or chest cavity
2. thrombosis of arteries and/or veins (formation of blood clots) which may lead to stroke, embolus, or potentially fatal complications
3. excessively enlarged ovaries which have the possibility of rupturing or twisting

Any of these three problems may require prolonged hospitalization.

Because of the potential for these severe complications, it is important that we carefully monitor your response to these medications. This monitoring also allows your physician to determine when the eggs are ready for the next stage, oocyte (egg) retrieval. Monitoring includes frequent blood drawing for estradiol (estrogen) and possibly progesterone, LH and FSH levels. These blood tests will take place over approximately a 12 day period. Risks associated with blood drawing include:

1. pain
2. tenderness or infection of the skin
3. bruising or scarring of the site of blood draw
4. development of a blood clot in the vein (thrombosis, thrombophlebitis)

The second portion of the monitoring phase involves the use of ultrasound to measure follicular growth. The eggs develop inside fluid-filled cysts of the ovaries called follicles, which enlarge as the eggs mature. Ultrasound studies usually begin after an estrogen response has been measured and continue on a daily basis until oocyte (egg) retrieval. The ultrasound studies are performed using a vaginal probe. Vaginal sonograms carry no appreciable risk but may cause slight discomfort, particularly as you near the point of ovulation.

Ovarian stimulation with the fertility medications causes multiple follicles to develop. This is desirable in IVF because as the number of eggs increases, the chance for success increases. Multiple embryos can also increase the risk of multiple pregnancy. Approximately 20-25% of pregnancies with IVF will be multiple. Most of these will be twins but triplets, quadruplets or even greater multiple pregnancy can occur. A

procedure called "selective reduction of pregnancy" has been performed in several medical centers across the country in selected cases of triplets or more. More information on this procedure is available upon request.

A possible association between the use of fertility drugs and an increased risk of developing ovarian cancer has been raised by some investigators. The exact risk, if any, is unknown at this time due to the problems associated with conducting such studies. The Food and Drug Administration, as well as other national agencies and medical organizations, do not advocate a change in prescribing these fertility drugs at this time.

Step 2: Oocyte (Egg) Retrieval

For IVF, collection of eggs is usually performed transvaginally under ultrasound guidance. A needle is inserted through the vaginal wall into the ovaries using ultrasound to locate each follicle. The follicular fluid is suctioned to collect the eggs. Although patients are given pain medications intravenously, some women may experience some discomfort during the procedure. Generally, the oocyte (egg) retrieval takes 30-60 minutes. Patients are usually discharged home within a couple of hours after the retrieval. Risks of oocyte (egg) retrieval include:

1. potential reactions from the drugs and procedures used in the administration of anesthesia.
2. risks associated with the passage of the needle through the vagina into the ovaries, including infection, bleeding, damage to the bowel, bladder, blood vessels, ureter, uterus or ovary(ies), and adhesion formation (internal scarring) following the procedure. although uncommon, significant bleeding or damage to bowel may occur, and surgery may be required to repair such damage. this is a very uncommon event. rarely, infection may become severe enough to require hysterectomy and/or removal of one or both ovaries.

In rare instances, it may be advantageous to retrieve eggs by laparoscopy, usually performed as an outpatient procedure. While under general anesthesia a telescope (the laparoscope) is inserted through the navel to visualize the ovaries and fallopian tubes. Smaller incisions made lower on the abdomen allow for introduction of the needles and catheters necessary for oocyte (egg) collection. Because this is a surgical procedure, specific risks are assumed:

- 1 risks of anesthesia, including allergic reaction and compromise to the function of the heart and/or lungs
2. risks associated with incisions, introduction of instruments, and oocyte retrieval:
 - a. bleeding
 - b. infection
 - c. damage to the bowel, bladder, blood vessel, ureter, or ovary(ies)
 - d. adhesion formation
- e. If significant damage to the bowel occurs, surgery may be required to repair such damage. In this instance, the IVF cycle may be cancelled. This is an extremely rare event.

Generally, the laparoscopic procedure may take from one to two hours to complete. Patients are usually discharged home a few hours after the laparoscopy.

Step 3: Sperm Collection and Preparation

Each man/partner will be asked to provide a semen sample by masturbation on the day of the oocyte (egg) retrieval. This is usually obtained one to two hours after the completion of the retrieval. We ask for

abstinence from ejaculation for two to five days prior to providing this semen specimen. The sperm will be prepared for inseminating the collected eggs in our laboratory. A second sample of fresh semen may be needed the day of or the day after egg retrieval to inseminate egg(s) that were not mature or did not fertilize with the first semen specimen. Because this can be a stressful time period for men, the man/partner may be unable to produce a specimen when needed. If this occurs, any eggs collected will be discarded. Men who feel that they may have difficulty producing a semen specimen have the opportunity to have their specimens frozen by our laboratory ahead of time for use in this situation.

Step 4: Insemination of Eggs and Development of Embryos

After the eggs have been retrieved, they are immediately transferred to the adjacent laboratory for identification, evaluation, and preparation for insemination. In the process of collecting the follicular fluid, many eggs are usually obtained. It is recommended that all of these eggs be inseminated to maximize the number of embryos available to the couple undergoing therapy. Any objection(s) to the insemination of all retrieved eggs should be stated in writing and attached to the IVF-ET consent form. Otherwise, the prepared sperm will be added to each egg and they will be allowed to incubate overnight under controlled laboratory conditions. The next day, each egg is evaluated for evidence of fertilization. However, it is possible -that no eggs fertilize. If this happens, the laboratory staff will re-inseminate the eggs or perform intracytoplasmic sperm injection (ICSI) in order to obtain embryos. If fertilization still does not occur, the eggs will be discarded and the remainder of the procedure will be cancelled. In the case of severe male factor, the couple may be asked to consider the option of using anonymous donor sperm (obtained through a licensed sperm bank) if it is not possible to obtain sufficient sperm from the partner at the time of fertilization.

The eggs that have fertilized will be allowed to develop for one or more additional days under controlled laboratory conditions before they are placed inside the woman's uterus. Depending upon the couple's wishes, some fertilized eggs or embryos may be frozen and stored for future use.

After the embryos are transferred to the womb, the woman will receive progesterone supplementation by a combination of oral troches and rectal/vaginal suppositories. Administration of these medications after egg collection has been shown to create a more favorable uterine environment for the embryos, which therefore increases pregnancy rates. Side effects of progesterone include:

1. vaginal dryness
2. bloating
3. depression
4. mood swings
5. breast tenderness
6. delay of menses

Synthetic progesterone-like medications have been associated with certain birth defects. By using only natural progesterone, the risk of drug-induced birth defects are significantly reduced. It is important to note, however, that birth defects occur in approximately 3 % of spontaneously conceived pregnancies in the USA. Therefore, use of natural progesterone does not guarantee a child without a birth defect.

Step 5: Embryo Transfer

Embryos are transferred into the uterus through a small tube, or catheter. This procedure does not require any anesthesia and is usually painless. The embryos are placed in a small amount of fluid inside the catheter, which is passed through the cervix at the time of a speculum examination. The embryos are

deposited in a manner so they reach the top part of the uterus. The number of embryos transferred depends on individual circumstances of the couple, two to six embryos may be transferred in one treatment cycle.

Embryo transfer may cause mild cramping. During the process of transfer, the embryo(s) may be displaced through the cervix (causing loss of embryos) or into the fallopian tubes (causing possible tubal ectopic pregnancy). There is a small risk of bleeding or infection as a result of the transfer procedure.

After transfer, the woman may get dressed and leave. A pregnancy test will be done 12-14 days after the transfer regardless of whether you have had any uterine bleeding.

The transfer of several embryos increases the probability of success. If you do not make arrangements for embryo transfer at the time recommended, your chances for pregnancy could decrease. Multiple embryo transfer also increases the risk of multiple pregnancy. Approximately 20-25 % of pregnancies with IVF will be a multiple pregnancy. Most of these will be twins. Triplets, quadruplets or even greater multiple pregnancy can occur. Any multiple pregnancy carries an increase risk of miscarriage(s), premature labor and premature birth as well as an increased financial and emotional cost. Pregnancy-induced high blood pressure and diabetes are more common in women pregnant with more than one fetus. Prolonged hospitalization may be necessary for these pregnant women, and for the mother and babies after delivery. In the event of multiple pregnancies, the option of selective reduction will be reviewed with the couple. Tubal (ectopic) pregnancy is also possible, and a combination of normal pregnancy and ectopic pregnancy may occur. A tubal pregnancy is a condition that may require laparoscopy or major surgery for treatment. Like spontaneous (natural) conceptions, pregnancies that arise through IVF may result in miscarriage. In the event of a miscarriage, a dilatation and curettage (D&C) may be required.

Couples going through therapy must choose one of the following options for handling of any remaining embryos:

1. Freezing (cryopreservation) of remaining embryos for use by the couple in future treatment cycles. This option requires an additional charge.
2. Anonymously donating the embryos for use by another infertile couple(s), if the donating couple and the donated embryos meet the screening criteria. You will not receive any money for this donation. ARHC reserves the right to cryopreserve (freeze) any donated embryos as well as the right to discard any donated embryos if a suitable woman cannot be identified to receive the embryos.
3. Allowing the embryos to develop in the laboratory until they degenerate, at which time they would be disposed of in a manner consistent with professional ethical standards and applicable legal requirements. This usually occurs within 10 days after egg collection.

GENERAL CONCERNS:

Any assisted reproduction process or technique can be psychologically stressful. Significant anxiety and disappointment may occur. We encourage you to consider short-term supportive counseling during this time and will provide you with a list of psychiatrists, psychologists, and social workers who may help you through this stressful time.

A substantial time commitment is required by both partners to complete an entire course of IVF therapy. It will be necessary for couples to adjust their schedules to undergo the required testing and therapies associated with IVF-ET. It is the responsibility of the woman to report to our office as scheduled for repeated ultrasound examinations and blood tests over several days or weeks before and after the expected time of egg collection. It is the responsibility of the man to be available to at the time identified by the physician to provide sperm.

THEORETICAL CONCERNS & POTENTIAL FOR SUCCESS:

Unfortunately, neither conception nor successful outcome of pregnancy is guaranteed by the IVF-ET procedure. There are many reasons why pregnancy may not occur with the IVF-ET procedure. In fact, there are complex and largely unknown factors, which limit pregnancy rates following assisted reproductive techniques. Some of the known reasons for failure include, but are not limited to:

1. There may be a failure to recover an egg because:
 - a. follicles that contain mature eggs may not develop in the treatment cycle
 - b. ovulation has occurred before time of egg recovery
 - c. one or more eggs cannot be recovered when the follicles are suctioned
 - d. pre-existing pelvic scarring and/or technical difficulties prevent egg recovery
2. The eggs that are recovered may not be normal
3. There may be insufficient semen to attempt fertilization of the recovered eggs because the man is unable to produce a semen specimen, because the specimen contains an insufficient number of sperm to attempt fertilization or because the laboratory is unable to adequately process the specimen provided, or because the option to use a donor sperm as a "back-up" was declined.
4. Fertilization of the eggs to form embryos may not occur even when the egg(s) and sperm are normal
5. The embryos may not develop normally or may not develop at all. Embryos, which display any abnormal development, will not be transferred.
6. Embryo transfer into the uterus may be difficult/impossible or implantation(s) may not occur after transfer, or the embryo(s) may not grow or develop normally after implantation.
7. Any step in the IVF-ET process may be complicated by unforeseen events, such as bad weather, equipment failure, laboratory conditions, infection, human error and the like.

In the event the couple should die before embryo transfer, the embryo(s) will be discarded unless other provisions are made in writing.

When pregnancy does occur, often it will be a normal pregnancy. However, there is always a risk of abnormal pregnancy, miscarriage, blighted ovum, ectopic pregnancy or premature delivery. Congenital abnormalities, genetic abnormalities, mental retardation or other birth defects which occur in approximately 3 % of spontaneously-conceived pregnancies may also occur in children born following assisted reproductive techniques. A large review of a subset of children born following assisted reproductive procedures found the incidence of developmental anomalies similar to a control group of children spontaneously conceived. Women with multiple pregnancies have a much higher risk of complicated pregnancies, including the following: toxemia, pre-eclampsia, miscarriage, premature labor and delivery, stillbirth, cerebral palsy in the babies, birth defects, and other complications.

ALTERNATIVES TO IVF-ET:

Depending upon the individual and unique cause(s) of infertility for each couple, conception through alternative means other than IVF-ET may or may not exist. Possible success rates of these alternatives may vary depending upon the type and severity of the cause of the infertility. For some couples, it may even be possible to conceive spontaneously without a physician's help. You should discuss these alternative treatment methods with your physician before you proceed with IVF-ET therapy.

THE USE OF CO-CULTURE OF IVF EMBRYOS

BACKGROUND

The requirements for normal development of human embryos are poorly defined. Culture of human embryos in the laboratory is usually performed in a simple salt solution supplemented with serum proteins and energy substrates. In nature, the early embryo would remain in the fallopian tube for the first 3-4 days of development. In this environment, the embryo would be exposed to normal body fluids and would also have direct exposure to and contact with the cells of the fallopian tube. These cells provide a supportive environment for the developing embryonic cells. By co-culturing feeder cells along with the embryos, we attempt to mimic this natural environment. Co-culture of early embryos in vitro is routinely performed for clinical and research purposes in many animal species.

CO-CULTURE PROCEDURE

Our laboratory will generally use the woman's granulosa cells for co-culture if the embryologists determines this to be beneficial. Rarely, the embryologist may choose either of two alternative co-culture cell types that have been shown to be successful in supporting in vitro embryo development. They are buffalo rat liver cells (BRL cell) or bovine oviduct epithelial cells. These cells have been screened for viral and bacterial contamination (including Hepatitis and the AIDS virus), and have been used in a relatively large number of human IVF cases at several IVF centers in the U, S.A. Both have proven to be compatible with successful pregnancy in humans.

To optimize the effect of these cells, we continue co-culture of fresh human IVF embryos until the third day after egg collection before uterine transfer. This bridges a critical period in embryonic development. Many human embryos will stop developing during these 3 days, and co-culture is thought to help with this transitional period. In the case of thawed zygotes (1-cell embryos), co-culture will be performed from time of thawing until replacement which is typically 24 hours.

RISKS AND LIMITATIONS

This procedure is most commonly used with patients who have previously undergone an unsuccessful IVF cycle. Although the results to date have been good, these studies remain preliminary. The effectiveness of human embryo co-culture is still being defined and the likelihood of success cannot be predicted.

We can not guarantee that the use of co-culture will improve the chances of establishing a pregnancy, There is also no assurance that pregnancies established using co-cultured embryos would be normal in course or outcome. This is a new and experimental procedure. It is not appropriate for all IVF cycles. Although it is unlikely, it may produce unknown risks to the baby and/or mother. It cannot be entirely ruled out that some as yet undetected contamination or virus may be transmitted via the co-culture cells to the embryos to the mother.

INFORMED CONSENT

IN VITRO FERTILIZATION AND EMBRYO TRANSFER THERAPY

We, _____ (woman, referred to herein as "Patient") and _____ (man, referred to herein as "Spouse"), have elected to undergo in vitro fertilization and embryo transfer (IVF) therapy at the Atlanta Reproductive Health Center (*referred to herein as ARHC*). We certify that the following statements represent our understanding and acceptance of conditions, responsibilities and risks involved in the use of IVF therapy.

RISKS AND LIMITATIONS

We understand and agree to assume the risks involved in IVF therapy, which include but are not limited to:

1. Repeated blood sampling causing a risk of redness, small bruises, and, to a lesser extent, infection or thrombosis.
2. The utilization of fertility drugs to induce ovulation may impose certain risks including physical as well as emotional pain or discomfort, blood clotting, ovarian tumors/cancer and the related risks of ovarian hyperstimulation syndrome, which can cause death.
3. Material risks of egg retrieval procedure: DEATH, RESPIRATORY ARREST, CARDIAC ARREST, BRAIN DAMAGE, DISFIGURING SCAR, PARAPLEGIA OR QUADRIPLÉGIA, PARALYSIS OR PARTIAL PARALYSIS, LOSS OF FUNCTION OF ANY LIMB OR ORGAN, SEVERE LOSS OF BLOOD, ALLERGIC REACTION AND INFECTION. These are material risks attendant to any surgical procedure. The specific physical risks involved regarding surgical egg recovery from Patient's ovaries including pain and discomfort, anesthetic complications, surgical complications such as injury to the bowel, blood vessels, or other structures, bleeding, and/or infection. Bleeding or other injuries or complications resulting from the egg retrieval may require an invasive surgical procedure to correct the complication. Any such complication or its correction could effect future fertility.
4. During the egg retrieval procedure, the physician/surgeon may become aware of conditions or complications which were unforeseen or not known before the start of the procedure. I therefore authorize and request the physician/surgeon and such assistants or physicians as may be present to perform such additional or different operations or procedures as are necessary or appropriate in the exercise of professional judgment to treat, cure or diagnose such conditions.
5. There is a much higher probability of a multiple gestation pregnancy (twin, triplet, quadruplet) outcome using IVF as opposed to other treatments for infertility.
6. If pregnancy results from this procedure, there is a possibility of complications from pregnancy and parturition or other adverse consequences. The possibility of complications during pregnancy and parturition are greater in the case of a multiple gestation pregnancy.

We acknowledge and agree that within the human population a certain percentage (approximately 4%) of children are born with physical and/or mental defects and that the occurrence of such defects is beyond the control of ARHC Physicians and Staff. We therefore agree that the Atlanta Reproductive Health Centre, Dr. Mark Perloe, Dr. E. Scott Sills, its officers, directors, agents and employees including physicians and staff do not assume responsibility for the physical or mental characteristics of an child or children born as a result of IVF therapy.

We acknowledge and agree that our acceptance into the IVF program and our continuing participation is within the sole discretion of ARHC. We understand that we can withdraw from the program at any time by written notice to ARHC without affecting the availability of other present or future medical evaluations or treatments within ARHC. ARHC's physicians may terminate IVF therapy when, in their best medical judgment, it is prudent to do so. The physician in charge will consult with Patient and Spouse prior to such termination and will discuss options for future therapy.

We acknowledge our understanding that most couples who require IVF therapy may not be covered by medical insurance for some or all of this treatment. We affirmatively represent we are financially able to pay for this therapy and are responsible for all medical costs incurred during our evaluation and treatment at ARHC. We will promptly pay all charges, which we may incur. We are aware that there will be charges we must pay before the first medications are administered in any separate treatment cycle. **If we are found not to have third party insurance coverage for IVF, we understand that attempting to obtain insurance reimbursement for non-covered charges may constitute fraud. We agree not to submit these bills for uncovered charges to our carrier for reimbursement.**

We acknowledge and accept that ARHC are teaching facilities and that the IVF staff will include attending physicians, fellows, residents, interns, scientists, technicians, nurses and medical students. We consent to allowing ARHC IVF staff or other medical personnel to observe laboratory procedures or any other treatment or procedure performed on me or on my behalf. Furthermore, it is possible that our participation in this program may aid in the development of techniques that may help other infertile couples and/or may yield new and useful information for medical science. Therefore, we consent to the collection and publication of information and data and the making of photographic and/or audiovisual tapes during the course of our IVF therapy for use in advancing medical education and research. However, under no circumstances will our identity be revealed.

We consent to the use and subsequent disposal of eggs or embryo(s) that are judged to be not developing or viable, unfertilized eggs, and/or eggs fertilized by too many sperm in approved research. In addition, we consent to the disposal of or use of other cells, body tissue and fluids that may have been obtained during the IVF process for research purposes.

We understand and accept that we also have the following choices as to disposition of potentially viable embryos which are not used in our IVF therapy and authorize the ARHC physicians and/or staff involved in this procedure to: *(please mark and place initials of both man and woman beside one choice)*

- _____ Cryopreserve (freeze) the embryos for our use at a future time. An additional consent form outlining additional requirements and fees for cryopreservation must be signed if this option is selected.
- _____ Discard the excess viable embryo(s) in any manner deemed appropriate by the IVF team.
- _____ Donate the embryos to another infertile woman. We recognize that donated embryos will be frozen for storage. This option is only possible if we complete additional medical and genetic screening. We consent that ARHC may dispose of the donated embryos in any manner deemed appropriate by ARHC if a suitable woman cannot be identified to receive them.
- _____ Use the embryos in research projects permitted under the policies of Atlanta Reproductive Health Centre policies and applicable legal requirements.

COMPREHENSION OF CONSENT AGREEMENT

We have read and understand this document and additional information provided. We have discussed this document and additional information with Dr. _____, who has provided us ample opportunity to ask any questions regarding IVF therapy and who has answered our questions to our satisfaction. We acknowledge that no guarantee or assurance has been made to the results that may be obtained. We further acknowledge that this document is by no means a complete record of our conversations with ARHC physician(s), faculty and staff and are satisfied that we are sufficiently advised and informed to make this decision.

CONSENT

We, understand and accept the conditions, risks and limitations of participating in the ARHC IVF program. We therefore voluntarily consent to undergo the procedures associated with this therapy. We are 18 years of age or older.

RELEASE

We agree to absolve, release, indemnify, protect and hold harmless the Atlanta Reproductive Health Centre, its officers, directors, agents and employees from any and all liability for any adverse outcome, however remote, arising from IVF therapy including but not limited to complications related to the IVF therapy, complications related to pregnancy and/or childbirth, and/or the birth of a physically or mentally deficient child. Additionally we release, discharge and acquit harmless the Atlanta Reproductive Health Centre, its officers, directors, agents and employees from any and all liability in connection with subsequent disputes arising between patient and spouse or any other third party in connection with the control and/or disposition of any fertilized eggs or embryos in existence as a result of this therapy, or the custody and/or support of any child(ren) born as a result of this therapy.

Patient's signature

Date

Spouse's signature

Date

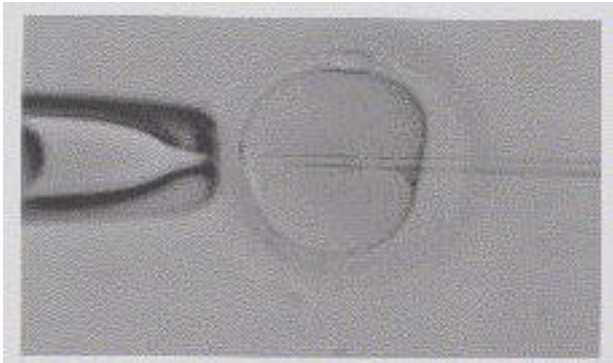
Notary Public/Witness' signature

Date

MICROMANIPULATION TECHNIQUES

OFFER NEW HOPE FOR COUPLES WITH MALE FACTOR INFERTILITY

By Marc Goldstein, M.D., Zev Rosenwaks, M.D., and Linda F. Davey



A tiny pipette is used to inject a single sperm into the awaiting egg in a revolutionary new procedure, Intracytoplasmic Sperm Injection.

In any field of medical research, success is often measured in minute degrees, the impact of which may only be known to those whose careers are spent in the laboratories. Occasionally, however, there comes a discovery so astounding that it revolutionizes medical procedure. Such is the case with Intracytoplasmic Sperm Injection, or ICSI, a new infertility treatment utilizing micromanipulation technology that specifically addresses male factor infertility issues. ICSI is so remarkable, in fact, that most treatments previously used have been abandoned in its favor.

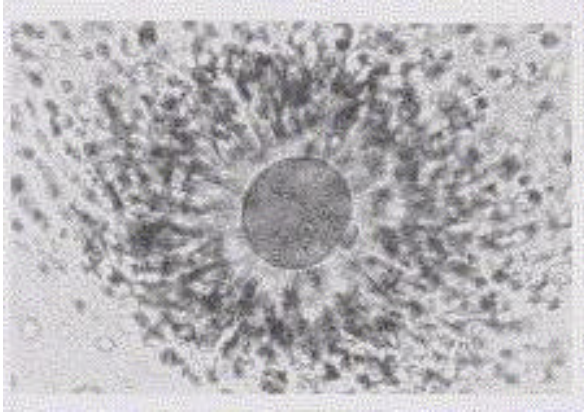
MALE FACTOR INFERTILITY - A DEFINITION

Male factor infertility can include any of the following problems: low sperm counts, poor motility or movement of the sperm, poor sperm quality, or sperm that lack the ability to penetrate an egg.

MICROMANIPULATION TECHNIQUES - AN OVERVIEW

The first process used to address the problems of male factor infertility was called Partial Zona Dissection (PZD). Using PZD, the zona pellucida, or shell, surrounding a woman's egg was opened, using either chemical dissolution or a sharp instrument to file through the shell. This process, while certainly a step forward in the relatively new field of micromanipulation, was considered rather passive because even with the zona opened there was no guarantee the sperm would enter and fertilize the egg. With PZD, frequently too many sperm would enter the egg causing genetic abnormalities and arrested development of the zygote. With any of those problems, a couple was not helped to achieve pregnancy through the PZD process.

A logical next step was a process called Sub-Zonal Insertion (SUZI), which was similar to PZD, but more aggressive. With SUZI, once the shell was punctured the sperm was then injected into the area between the zona and the egg, rather than left to find its own way. The sperm still had to enter the egg, but its chances were greatly increased with this specific placement. This process dramatically increased the success rate of in vitro fertilization (IVF), and could partially overcome poor motility and low sperm count. However, polyspermy (more than one sperm entering egg) was still a problem. It was still not possible to control the number of sperm entering the egg with the SUZI process. Few could have imagined how dramatically the ICSI process would change all that.



This Metaphase II Oocyte has extruded its first polar body and displays a sunburst array of cumulus-corona cells. The cumulus cells must be removed before the ICSI procedure can take place.

ICSI - WHAT IS IT?

While at a clinic in Belgium, Gianpiero D. Palermo, M.D., currently associate professor of embryology, the Center for Reproductive Medicine & Infertility, The New York Hospital-Cornell Medical Center, pioneered the ICSI process.

When a single sperm was injected directly into the egg, it virtually eliminated the problems and limitations found with previous treatments. Palermo and others studying ICSI found that not only did it address the issues of poor sperm motility and low count, but it was also successful with sperm that were considered less than ideal for an IVF process. In addition to normal sperm, with the ICSI process, Dr. Palermo has successfully used round-headed sperm, those collected directly from the epididymis and those previously cryopreserved.

ICSI - HOW IS IT DONE?

The ICSI process takes place following a cycle during which fertility drugs are administered to the female partner to aid in the production of multiple eggs. The eggs are then surgically removed. In normal circumstances, the egg is surrounded by a cluster of cells known as the cumulus-corona cells, all of which must be removed before the sperm injection takes place. If cumulus were not removed, it could create a shadow that may impair viewing and jeopardize the injection. This removal also allows the embryologist to assess the maturity of the egg. Sperm is collected from the male partner, usually through masturbation.

Once eggs and sperm are collected, the actual process of injecting a single sperm into the egg is carried out in a laboratory using a petri dish or a glass slide with a well in the center. Though some tools used in the injection process are available commercially most embryologists prefer to make their own. Quality tools are essential to the overall success of an ICSI program. A glass holding pipette 40-50 microns in diameter is used to secure the egg, usually on the left side. An injection needle with an outer diameter of roughly five to six microns and an inner diameter of three to four microns, is used to pierce the egg membrane on the right side at about 3:00 o'clock. The injection needle has an extremely sharp or beveled end, one that will most easily pierce the egg membrane. For embryologists using a glass slide, the arm of the injecting needle can be straight or only slightly bent at the end. For those using a petri dish, the arm of the needle must be angled about 40 degrees to ensure manipulation can occur without interference from the lip or side of the petri dish.

Active sperm are chosen and placed in a drop of polyvinyl pyrrolidone solution, or PVP. This solution is dropped onto a viscous medium such as mineral oil and is used to slow down the activity of the sperm and also serves as a cleanser. It is necessary that active sperm be slowed so they may be properly viewed and

so they are not damaged once drawn into the injecting needle. Though active sperm are chosen prior to being placed in the PVP, once in the solution, the sperm with the least amount of activity are the best candidates for injection. In fact, those that stick to the bottom of the well by their heads are often the best choices. The reason for this choice is that an actively moving sperm tail can whip around inside an egg and cause damage or even destroy it. In fact, before putting the sperm in the egg, the tail is pinched to immobilize it.

As with the selection of tools, the method used to stage the process is a matter of preference of the embryologist or technician. Commonly, the sperm are placed in a drop in the middle of the dish or slide, then surrounded by eggs that have also been placed in a viscous medium. In some cases, only one egg is placed in a droplet around the sperm in order to preserve their individuality, or some technicians prefer all sperm in one drop and all eggs in another. Both methods have been used successfully.

Once the egg is secured by the holding pipette, it takes less than 60 seconds for the sperm to be injected directly into the center of the egg. There are many factors that must be mastered to ensure success of the ICSI process, chief among them is successful penetration of the egg membrane, ensuring the sperm is not redrawn back into the pipette upon removal from the egg, and guarding against injecting too much medium into the egg along with the sperm. The skill of the technician is a critical factor in the success of the ICSI process. Remarkably, once the injecting pipette is withdrawn, the egg will close and assume its original shape within 60 seconds.

Once the egg is injected with a single sperm, it is observed approximately 14 hours later to see if fertilization has taken place, and 24 hours later to ensure that the egg has cleaved. In some cases, assisted hatching, or removal of anucleated fragments located between the cell divisions, is performed to ensure proper cleavage. If each step has occurred as planned, implantation of the fertilized egg into the female patient can occur within 72 hours of the ICSI process. In most cases, the number of embryos implanted into the patient depends upon her age. The following chart indicates a usual number.

ICSI - WHAT'S IN THE FUTURE

The future for the ICSI process is very promising. Researchers expect that the current fertilization rate of 65 percent will continue to improve. As stated previously, sperm selection for the ICSI process focuses on available motile sperm, but it is only a matter of time until the ability to select living, but non-motile sperm will help up the odds even more for couples seeking to have a baby. Currently, results are poor with sperm that don't move as it is not known whether they are alive or dead. The staining method currently used for determining whether non-motile sperm are dead or alive kills living sperm. In the future, a technique will be developed which will help determine which sperm are alive and viable for the ICSI process without killing them with the stain.

Another exciting breakthrough in the field of male factor infertility and micromanipulation is a process called Round Spermatid Nucleus Injection or ROSNI that specifically targets men who are not manufacturing sperm and have zero sperm counts. The ROSNI process involves taking immature cells (round spermatids) directly from the testicle, removing the nucleus containing the genetic material and injecting the nucleus into the female partner's eggs, which are removed during an in vitro fertilization cycle. While this process has yet to produce a live birth, researchers believe it will eventually become a successful technique that will allow men who previously had no hope, to father a biological child.

Clearly, there continues to be much hope and promising news for couples facing infertility.

INFORMED CONSENT

MICROINSEMINATION

Microinsemination is a procedure that can be used to increase the chance of fertilization for a couple undergoing in vitro fertilization and embryo transfer (IVF-ET) who may have a reduced chance of fertilization through standard egg insemination procedures. Clinical situations in which the techniques of assisted fertilization may be useful include cases of male infertility, immunological infertility, or when there has been failure of fertilization or low rate of fertilization in previous IVF treatment sessions. The method of microinsemination used at ARHC is intracytoplasmic sperm injection, or ICSI.

Eggs and sperm are obtained by using standard methods during an in vitro fertilization treatment cycle. Sperm are then prepared in a manner to select and retain only the most active sperm in a small volume of culture medium. Substances known to increase the motility of sperm may be added to the nutrient liquid used to prepare sperm in cases where the movement of the sperm is reduced. After exposing the mature eggs to an enzyme that removes the cumulus cells which surround the egg, each egg is placed under a microscope and held in place by gentle vacuum with a small glass tube called a micropipette. A single sperm is then drawn up into an extremely sharp, hollow glass needle along with a very small amount of the nutrient liquid medium. The needle is then quickly passed through the zone pellucida (the gel-like substance surrounding each egg) and the cell membrane to inject the sperm into the center of the egg by using a special microscope assembly. Approximately 16-18 hours after ICSI, the eggs are examined under the microscope for any sign of damage and to assess for the presence of two distinct pronuclei, which indicates normal fertilization. Subsequent maintenance of embryos and the performance of the embryo transfer is the same as standard IVF.

Microinsemination is a relatively new procedure. The first pregnancy resulting from the injection of sperm into the subzonal space of human eggs was reported by Ng and colleagues in Singapore in 1988. Subsequently, pregnancies and births resulting from microinsemination of human eggs have been reported by clinical groups in North America, Europe, Japan, and Australia. Fertilization rates with ICSI are higher than with other utilized micromanipulation techniques to achieve fertilization, such as partial zone dissection (PZD) or subzonal insemination (SZI).

RISKS OF MICROINSEMINATION

Injection of sperm into the egg is a new procedure, with thousands of on-going pregnancies or babies being born worldwide since the introduction of ICSI. Therefore, this procedure may involve risks and discomforts to the fetus and/or mother that are presently not identified. Perforation of the zone may decrease the protective effect of the zone on the egg and early embryo. The procedures of microinsemination may result in degeneration of the egg or result in formation of abnormal embryos. Unforeseen technical problems may arise which preclude successful fertilization via microinsemination. The likelihood of success cannot be predicted.

BENEFITS OF MICROINSEMINATION

Microinsemination may increase the chances of pregnancy in couples whose chance of successful fertilization through standard IVF techniques is reduced. While microinsemination may increase the chances of becoming pregnant, there are no assurances, either stated or implied, that

microinsemination may result in pregnancy. Both in vitro fertilization and embryo transfer together with microinsemination are new technologies and are still considered experimental; therefore, predictions about the likelihood of success of such treatments are less certain than is usually the case with other medical procedures.

The chance of any woman giving birth to a child with congenital birth defects in the United States is 3-4 %, no matter how pregnancy is achieved. While available data does not indicate any reason to expect that microinsemination will result in increased incidence of chromosomal abnormalities in human infants, the relatively few births resulting from microinsemination of human eggs do not allow a reliable analysis of congenital abnormalities in infants born of eggs that have been microinseminated. The Brussels, Belgium fertility treatment center which pioneered the ICSI technique has reported that 7 of 289 babies born through this procedure had major congenital malformations (2.4%), which falls within the expected range of malformations in the general population where pregnancy was achieved spontaneously through intercourse.

ALTERNATIVES TO MICROINSEMINATION

The alternatives to microinsemination include increasing the sperm numbers that surround the egg while it is incubating in the laboratory or, in cases of male factor infertility, the use of donor sperm. Increasing the sperm concentration may increase the chance of fertilization but may have an adverse effect on the laboratory environment of the egg.

MICROINSEMINATION RELEASE & CONSENT

We, the undersigned, have read the above information and recognize the described potential benefits and risks of in vitro fertilization by microinsemination and uterine transfer of resultant embryos. We voluntarily request, authorize, and direct the personnel of ARHC to perform any and all procedures necessary for in vitro fertilization, microinsemination, and embryo transfer, as well as any such additional procedures that any of the staff may deem necessary. We acknowledge that we have previously executed the In Vitro Fertilization - Embryo Transfer Consent and that this Consent to Microinsemination is in addition to, and supplements, such other Consent. Further, we understand that the contents and terms of all Atlanta Reproductive Health Centre consent forms that we have signed apply to this Consent and are incorporated herein by reference.

Patient's signature

Date

Spouse's signature

Date

Notary Public/Witness' signature

Date

I have consulted with and explained the contents of this consent form to the above-signed patients.

Physician's Signature:

HUMAN EMBRYO CRYOPRESERVATION

INTRODUCTION

Human in vitro fertilization has been accepted for several years as an effective method of reversal of long-standing infertility. Worldwide use of this procedure has produced over 5,000 babies. The average pregnancy success rate in the world's most active IVF programs is about 15% -25 % per treatment cycle.

PROCEDURES FOR CRYOPRESERVATION (FREEZING) OF EMBRYOS

Oocyte retrieval under ultrasound guidance and subsequent fertilization and embryo culture will be conducted according to procedures currently being utilized. If there are more than 4 (or any other number selected by the patient) fertilized eggs or embryos, those fertilized eggs or embryos that are not placed inside the uterus during the treatment cycle in question will be cryopreserved (frozen) by one of several methods in use in IVF centers around the world. We will use techniques of controlled freezing and thawing of the embryos which appear to have the highest probability of success and which will be similar to those which have been successful in other IVF centers. The embryos will be stored in special plastic straws or glass vials placed in liquid nitrogen (extreme cold) reservoirs. This is a standard storage method for frozen embryos.

During a medication-prepared frozen embryo replacement cycle, you will follow a treatment schedule including Synarel or Lupron, Estrogen (pills and or patches), and Progesterone in order to achieve appropriate endometrial development of embryo transfer. Following replacement, Estrace / Estrogen patches and Progesterone will be administered daily until the 12th week of pregnancy or until a negative pregnancy test.

When cryopreserved embryos are utilized for replacement in a natural menstrual cycle, each patient will be monitored by ultrasound and LH measurement to determine when ovulation occurs. Shortly thereafter, the embryos will be thawed, the cryopreservative diluted and removed, and then the embryos will be cultured and placed into the uterine cavity at the appropriate time after ovulation to ensure probable synchrony between the developmental stage of the embryo and of the uterine lining. Embryo transfer procedures will be the same as presently being utilized for non-cryopreserved IVF embryos.

POSSIBLE ADVANTAGES OF HUMAN EMBRYO CRYOPRESERVATION

The cryopreservation of human embryos may offer some advantages when applied selectively to IVF-ET procedures. A patient often produces more than 3 or 4 embryos from a single egg retrieval. The transfer of more than 3 to 4 embryos into the uterus does not significantly increase pregnancy rates for most women, although the chance of a multiple pregnancy does increase. In the absence of cryopreservation, these embryos must either be transferred or allowed to develop in the laboratory until they cease to divide (after an interval of hours to days). The availability of cryopreservation reduces the possibility of a multiple pregnancy. More importantly, with cryopreservation, the remaining embryos may be stored for transfer in subsequent menstrual cycles.

Intrauterine placement of frozen embryos may be achieved without the need to undergo another gonadotropin (Gonal-F/Follistim) treatment cycle and egg retrieval. The natural menstrual cycle can be monitored and the -embryos thawed and placed into the uterus at the appropriate time. Alternatively, the patient may be treated with Lupron, Estrace or Estraderm, and Progesterone to provide the development of a uterine lining receptive to embryo implantation. Compared to a complete IVF-ET cycle, the use of frozen embryos reduces the number of procedures, the time and the cost to patients.

STATUS OF HUMAN EMBRYO CRYOPRESERVATION

The first pregnancy from a frozen human embryo was reported in 1983 and the first birth from a frozen embryo occurred in 1984. Since then, over 71 IVF centers in the United States have reported successful

pregnancies or birth from frozen embryos. In 1990, the 71 centers reported having frozen 23,865 embryos, transferred embryos in 32,980 transfer cycles, and produced 382 pregnancies and 291 births. More than half of cryopreserved human embryos survives after thawing. The chance for initiation of a pregnancy from a viable frozen embryo is about the same as with a non-frozen embryo.

CONSIDERATIONS AND RISKS

The Ethics Committee of the American Fertility Society has published guidelines for ethical consideration of embryo cryopreservation. Possible advantages of cryopreservation of embryos suggested by the Committee include:

- 6) Reduction of the risk of triplets or quadruplets by cryopreservation of embryos exceeding an optimal number for transfer to an individual patient.
- 6) Possibly increasing pregnancy rates by replacing thawed embryos during spontaneous ovulatory cycles or cycles in which the estrogen and progesterone hormone levels do not exceed that which naturally occurs.
- 6) ©Possibly decreasing the number of stimulated ovary (Follistim/Gonal-F) treatment cycles needed for attainment of pregnancy.

The primary concern with use of cryopreservation techniques is the possible loss of embryos to cryoinjury, meaning some healthy embryos may not survive freezing/thawing. The exact number of embryos lost to cryoinjury is currently unknown, but it is very likely that freezing will cause loss of some embryos, perhaps as many as 30-50%.

Another potential concern with cryopreservation is the unknown risk of birth defects in children produced from frozen human embryos. In the domestic animal industry, large-scale freezing and transfer of embryos has not resulted in increased birth defects. Although the number of human births from frozen embryos has been relatively small, as of 1994, the reported risk of birth defects has not been increased in babies born from frozen embryo transfer as compared to babies born by women who conceived spontaneously. The risk of physical defects after freezing, while probably low, is still unknown and will remain so until more live births result from frozen human embryos.

To maximize the likelihood of successful embryo cryopreservation at ARHC, the mechanical processes of human embryo cryopreservation will be laboratory-controlled to reduce technical failure. A back-up freezing system will be available to decrease the risk of interruption in the freezing process. Individual embryos will be labeled and identified according to origin, developmental stage, and date frozen. Permanent records will be kept at the storage location of individual embryos. Liquid nitrogen storage containers will be armed with an automatic alarm system to monitor nitrogen levels and prevent premature thawing. However, even with all these safeguards, the possibility of technical failure leading to loss of stored embryos cannot be totally eliminated.

Storage of frozen embryos will be continued for a maximum of five years. The disposition of any frozen embryos not transferred must be arranged in writing before cryopreservation (see attached consent). In the event of establishment of pregnancy during the retrieval cycle or subsequent embryo thaw cycles, it will be at the discretion of the couple as to whether the remaining frozen embryos should continue to be cryopreserved or should be appropriately discarded.

Please note that confidentiality of all records will be maintained with cryopreservation as with all medical care and other procedures performed at the Atlanta Reproductive Health Centre.

INFORMED CONSENT

CRYOPRESERVATION OF FERTILIZED EGGS AND/OR EMBRYOS

We, (woman, referred to herein as "Patient") and (man, referred to herein as Spouse-), have elected to use embryo cryopreservation (freezing) as a component of our in vitro fertilization (IVF) therapy at the Atlanta Reproductive Health (referred to herein as "ARHC").

BACKGROUND

In the course of an IVF treatment cycle, more viable embryos may be produced than are desired for embryo transfer in that same cycle. If so, these "excess" embryos can be preserved by freezing and stored for future use. In addition, there are conditions under which the physician managing your treatment will recommend that all embryos be frozen and that no embryo replacement be performed during your IVF treatment cycle. One such reason for this recommendation would be if the patient is at high risk for hyperstimulation syndrome at the time of your oocyte retrieval. Hyperstimulation syndrome is exacerbated by pregnancy and is easier to manage if the patient is not pregnant. In this situation, all viable embryos will be frozen and the replacement of thawed embryos will be performed only after the patient has recovered from the hyperstimulation.

Embryos may be frozen immediately after fertilization at the pronuclear stage, during early cleavage (2 to 8 cell stage) and after 4 to 5 days of culture at the blastocyst stage. If the patient and spouse consent to cryopreservation, the stage at which any embryos are frozen will be determined by laboratory personnel in conjunction with the physician managing your treatment.

The embryos will be stored in the frozen condition until the patient and spouse request their use and the physician responsible for your care determines that appropriate conditions exist in the patient for transfer of the embryos into the patient's uterus. At that time, some or all of the embryos will be thawed. Each embryo will be examined to determine whether it is viable, and if so, the transfer into the patient's uterus will occur.

The pregnancy success rate with frozen embryos transferred into the human uterus is approximately the same as with non-frozen embryos. However, some embryos do not survive the freezing process. Potential benefits of embryo freezing are an increased opportunity of achieving a pregnancy without undergoing multiple egg retrievals, a reduced risk of a multiple pregnancy (twins or more) by reducing the number of embryos transferred during the IVF treatment cycle, and better management of complications associated with the IVF treatment cycle such as hyperstimulation as described above.

RISKS AND LIMITATIONS

- 6) Establishing an IVF pregnancy using frozen-thawed embryos cannot be guaranteed for any woman.
- 6) Some or all embryos may not survive freezing and thawing.
- 6) Additional expenses are associated with the use of embryo freezing.
- 6) Embryo freezing has been successfully used in animals with no known adverse results. There is, however, relatively limited experience with human embryos. Although no birth

defects have been reported from the limited number of births from frozen human embryos, the risks associated with human embryo freezing, thawing and transfer are not well established at present.

- 6) Failure of storage containers can result in the loss of liquid nitrogen and damage or kill all of the embryos. Embryos are stored in industry standard semen storage tanks, that are monitored daily for liquid nitrogen level and maintained at greater than 75% of their capacity. Also the tanks are monitored by an alarm system which will signal laboratory personnel should liquid nitrogen levels become dangerously low. Even so, there is the potential that a tank might fail due to a spontaneous loss of vacuum or rupture of the vessel. Also disasters such as fires and storms as well criminal acts could damage the building housing the tanks and/or the tanks themselves. Any such event could result in the loss of the specimens.
- 6) You must agree to and accept future disposal of any remaining unused frozen embryos.

Several options for disposal of unused frozen embryos are described below.

We understand and agree that frozen fertilized eggs and/or **embryos will be stored by ARHC for a maximum of five years**. The storage fee for the initial two years of embryo storage is included in the initial cryopreservation fee. We also understand that at the beginning of year three and for each subsequent storage year, we will be required to pay the storage fees for that year in advance. Such fees are non-refundable in whole or in part. We agree to pay any storage fees as such fees become due.

We agree to immediately update ARHC should our address change and agree that our failure to maintain a current address with ARHC and/or the inability of ARHC to collect annual storage fees will signify our desire to terminate storage of frozen embryos. In such an event, or following the fifth anniversary of cryopreservation, whichever comes first, the frozen embryos will be disposed of in the manner we have indicated in the following section.

DISPOSAL OF EXCESS FROZEN EMBRYOS

Should the yearly fee for storage of your frozen embryo(s) remain unpaid for a period of 6 months after the first invoice is forwarded to our address as it is listed in our clinical records at ARHC, ARHC can conclude that we are no longer interested in storing these specimen(s) and ARHC may dispose of all of our frozen embryos in the manner we have indicated below. In addition, ARHC will dispose of the frozen embryos in the manner we have indicated below, if we provide written notification of our desire for the embryos to be discarded.

In the event that either of the above mentioned situations occur, we hereby instruct and authorize ARHC to dispose of any frozen embryos as *follows (Patient and Spouse must both initial the same choice)*:

- | | | |
|-------|-------|---|
| _____ | _____ | Thaw and dispose of the frozen embryos in any manner deemed appropriate by ARHC. |
| _____ | _____ | Donate the frozen Embryos to ARHC to offer the embryos for anonymous adoption by another couple. It is understood that if we select this option we waive any right and relinquish any claim to the donated embryos or any pregnancy or offspring that might result from them. We agree that any recipient |

receiving embryos which we have donated to ARHC may regard the donated embryos and any offspring resulting therefrom as her/their own children. If no adoptive couple is found, ARHC at its discretion is authorized to thaw and dispose of the embryos in any manner deemed appropriate by ARHC.

In the case of one of the circumstances listed below, we instruct ARHC to conduct disposition of any and all remaining frozen embryos based on our current wishes. Our wishes regarding each of the following situations are indicated by our initials. (*Patient and Spouse must both initial the same choice*):

- **Patient's Death**

_____ Disposition of embryos to be determined by Spouse.
 _____ Disposal of the embryos in any manner deemed appropriate by ARHC.

- **Spouse's Death**

_____ Disposition of embryos to be determined by Patient.
 _____ Disposal of the embryos in any manner deemed appropriate by ARHC.

- **Divorce (if not addressed in the divorce settlement)**

_____ Disposition of embryos to be determined by Patient
 _____ Disposition of embryos to be determined by Spouse.
 _____ Disposal of the embryos in any manner deemed appropriate by ARHC.

COMPREHENSION OF CONSENT AGREEMENT

We have read and understand this document and additional information provided to us. We have discussed this document and additional information with Dr. Perloe or Dr. Sills, who has provided us ample opportunity to ask any questions regarding IVF therapy and cryopreservation and who has answered these questions to our satisfaction. We acknowledge that no guarantee or assurance has been made as to the results that may be obtained. We further acknowledge that this document is by no means a complete record of our conversations with Atlanta Reproductive Health Centre physicians, and staff and are satisfied that we are sufficiently advised and informed to make this decision.

CONSENT

We, understand and accept the conditions, risks and limitations of embryo cryopreservation. We therefore voluntarily consent to the use of embryo cryopreservation to preserve the excess embryos resulting from our IVF therapy for potential future use. We are of eighteen(18) years of age or older.

RELEASE

We agree to absolve, release, indemnify, protect and hold harmless Dr. Mark Perloe, Dr. E. Scott Sills, Atlanta Reproductive Health Centre, it's officers, directors, agents and employees, from any and all liability for any adverse outcome, however remote, resulting from the cryopreservation and storage of our fertilized eggs and/or embryos, including but not limited to the loss or destruction of our fertilized eggs and/or embryos, and/or the birth of a physically or mentally deficient child. Additionally, we release, discharge and acquit harmless Dr. Mark Perloe, Dr. E. Scott Sills, Atlanta Reproductive Health Centre, it's officers, directors, agents and

employees from any and all liability in connection with any subsequent disputes between patient and spouse regarding the control of any frozen fertilized eggs or embryos, or the custody and/or support of any children ultimately born as a result of this procedure.

Patient's signature

Date

Spouse's signature

Date

Notary Public/Witness' signature

Date

I have consulted with and explained the contents of this consent form to the above-signed patients.

Physician's Signature:

Date

FINANCIAL INFORMATION

This information is provided as a guideline to answer some of the questions you may have as you consider participation in the Atlanta Reproductive Health Centre. Before your first treatment cycle, you will receive financial counseling to inform you of the fees that you will incur. *Please keep this information handy for reference.*

NEW PATIENT SCREENING APPOINTMENT

Couples desiring ART are required to have a screening/consultation appointment. The fee for this is not included in the cost of the typical ART cycle. You will be expected to pay for this screening / consultation appointment at the time of your visit. The charge for the consultation will be \$299 plus \$265 for transvaginal ultrasound. Additional testing procedures, supplies or other services may be necessary. If so, you will be responsible for the additional charge.

ESTABLISHED PATIENT SCREENING APPOINTMENT

Current patients of Atlanta Reproductive Health Centre will have an ART consultation appointment. Since your medical history is familiar to us and you probably have the majority of forms completed, the charge for an established patient screening/consultation appointment is ~ \$97. The fee for this ART consultation appointment and any required pre-screening is not included in the cost of the typical ART cycle and you will be expected to pay for this at the time of your visit.

INSURANCE COVERAGE

Most insurance companies do not cover assisted reproductive technologies. Although coverage may be available for pre-ART evaluation, most managed care plans that exclude IVF treatments will exclude any visits, procedures, testing and laboratory studies in preparation for an IVF treatment cycle. However, insurance policies vary widely and you should check your individual policy or call your insurance company to find out to what extent these procedures are covered. ***Submitting charges to your insurance company for reimbursement if you do not have coverage may constitute fraud.***

Adequate written documentation of your coverage and a pre-determination letter are required. You will be required to pay for any fees not covered by your insurance carrier.

DEPOSITS: WHAT'S COVERED, WHAT'S NOT

No Insurance Coverage for ART: If you are covered by a managed care plan that does not cover assisted reproductive technology or you have insurance, a deposit will be required prior to beginning your ART cycle. Your deposit to Atlanta Reproductive Health Centre will be considered a fixed flat fee payment in full for all medical treatment in our office including: office visits, ultrasounds, blood tests that are necessary to monitor your treatment AFTER you have begun receiving Humegon, Follistim or Gonal-F as well as oocyte retrieval, anesthesia, and embryo transfer up until the time a pregnancy test is ordered. Cryopreservation of embryos and storage for up to two years is included in the fixed fee deposit.

Charges not covered by the deposits will be expected to be paid at the time these services are rendered. These include:

- | | |
|----------------------------------|---------------------------------------|
| ✓ Your new patient evaluation | ✓ Pre-cycle office visits |
| ✓ Ultrasounds prior to ART start | ✓ Medication and drug supplies |
| ✓ Pre-cycle laboratory testing | ✓ Counseling or teaching visits |
| ✓ Pregnancy testing | ✓ Ultrasound to check early pregnancy |

Refunds cannot be given after you have started your ovulation induction treatment unless your cycle is cancelled.

Limited Insurance Coverage for ART: Prior to initiating your treatment cycle, if your insurance company has provided adequate documentation of their reimbursement levels, the required deposit may be modified.

Patients who wish to submit their charges to their insurance provider(s) for consideration of reimbursement may request an itemized bill. The insurance company may directly reimburse you for any covered procedures. ***If a predetermination of benefits indicates that insurance coverage IVF is not available, subsequent insurance payments received by Atlanta Reproductive Health Centre will be returned to the insurance company.***

PRE-CYCLE SCREENING

In order to achieve the best treatment results, we must carefully review your medical history and evaluate all factors that may limit your chance of success. Although you may have previously been tested for certain conditions, some tests may need to be repeated if they were obtained too long ago. In the course of your evaluation, we may find conditions that require further investigation prior to initiating therapy. The following is a list of laboratory tests that may be required. Be aware that not all

tests are required on all patients. By individualizing your treatment, we can offer the best treatment results. Some of the tests that may be necessary are listed below. The CPT codes and an estimate of the costs are included. In fact, some of these expenses may be covered by your insurance.

Payment for screening tests and services will be due at the time of your visit. The charges for these tests are listed below and are estimates only. These charges may be submitted to your insurance company, billed to you, or may require up front payments. Although we will make every effort to provide you with the latest and most accurate information regarding these charges, please be aware that laboratory fees and other pre-cycle screening fees are subject to change without notification.

CPT	Test	Estimated Cost
83001	FSH	~\$77
84144	Progesterone	~\$77
83002	LH	~\$72
86146	Prolactin	~\$75
82670	Estradiol ,	~\$84
86962	Rubella	~\$20
86287	Hepatitis B profile	~ \$40
87178	Chlamydia Direct	~ \$70
82627	DHEAS	~ \$72

CPT	Test	Estimated Cost
87109	Ureaplasma	~\$90
99070	LH Surge Kit	~\$35
89320	Semen Analysis, full	~\$132
86687	HIV	~\$63
86900	ABO-RH screen	~ \$21
86147	Anti-phospholipid panel	~ \$195
99070	Trial transfer	\$25
76856	Pelvic ultrasound	\$265

ATLANTA REPRODUCTIVE HEALTH CENTRE IVF CYCLE FEES

The total charges for a complete IVF cycle- from the beginning of your ART treatment through the pregnancy test--at the Atlanta Reproductive Health Centre ART Program will vary from patient to patient. Your total drug cost will depend on the length of time and the dosage of medication required to stimulate egg development.

The oocyte retrieval generally takes approximately 1 hour and the patient is required to recover for about 2 hours. The embryo transfer takes 30 minutes and the patient is required to recover for one hour. Fees for the above services are "flat" fees and are not dependent upon the length of the procedure.

The following tables present current fees and is only intended to provide an estimate of costs. These fees are established by the the Atlanta Reproductive Health Centre and are subject to change without notice.

Your initial screening appointment will include counseling with our Patient Relations Coordinator to discuss cost, method of payment, and available insurance coverage. Additional testing not listed below may be required to offer you the best possibility for success.

CPT	ARHC Professional & Laboratory Fees	Estimated Cost
99212	Brief office visits	\$65
76857	Follicular monitoring ultrasound	\$165
82670	Serum Estradiol	\$84
84702	hCG Quantitative	\$66
K0934	Percoll sperm prep	\$156
76948	Ultrasound guidance for oocyte retrieval	\$250
58970	Follicular aspiration	\$1450
89250	Oocyte identification, insemination & culture	\$1380
58974	Embryo transfer	\$664
89310	Semen analysis, brief	\$89
K1345	Embryo Freezing (includes 2 years storage)	\$500

CPT	Procedure Room, Supplies Facility Fees	Estimated Cost
K1438	Oocyte Retrieval	\$800
K1439	IV Anesthesia	\$500
K1440	Embryo Transfer, laboratory fee	\$150

TOTAL FEES & DEPOSITS

Because of the time required to develop an individualized treatment plan and the advanced preparation required in the laboratory and the operating room for these treatments, ***you will be required to make a payment for these services before the first day of fertility medication use*** (approximately 3 weeks before oocyte retrieval) unless you have written confirmation from ARHC stating otherwise.

You must pay two separate deposits (by cash, certified cashier's check, MasterCard/Visa or money order) to Atlanta Reproductive Health Centre prior to beginning your ART cycle. As your treatment plan is individualized your deposit amounts may vary from those listed below and fees are subject to change. The estimated fees and fixed deposit amounts are listed below:

<i>Pre-cycle Testing & Counseling</i> (prior to first Atlanta Reproductive Health Centre cycle)	~ \$1556
<i>Pharmaceuticals & Supplies</i>	~ \$2299
<i>Cycle Monitoring, Retrieval, Transfer & Cryopreservation</i> (ARHC deposit-fixed fee)	\$7405

OTHER FEES

Depending on the results of your ART treatment, the following additional procedures may be necessary.

CPT	Miscellaneous Additional Fees	Estimated Cost
76815	Obstetrical Ultrasound	\$186
K1347	Thawing Frozen Embryos	\$500
58974	Uterine Transfer of Thawed Embryos	\$664
99070	Embryo storage fee (annual)	\$200

SUCCESS RATES

“We know how to speak many falsehoods which resemble real things, but we know, when we will, how to speak true things.”

Hesiod

Few subjects are as confusing or misleading as IVF success rates. Success rates can be easily manipulated to enhance a particular programs public image. Therefore, reported IVF statistics provide little meaningful guidance for an individual patient hoping to achieve pregnancy with IVF. While experts in the field and statisticians have acknowledged this, the public does not generally understand this and places increasing emphasis on the statistics from individual programs.

I am frequently asked “What’s your IVF success rates?” The quick answer is somewhere between 0% to as high as 50%. Unfortunately, a meaningful answer is a lot more complicated. Obviously, success rates depend on how you define success and you calculate the total population. Do you mean clinical pregnancy rate? (*implantation seen on ultrasound*) or ongoing pregnancy rate (*fetal heart beat seen by ultrasound*) or delivery? Will the denominator in this calculation be the number of couples entering treatment or those going to oocyte retrieval or those having pre-embryos replaced into the uterus. But its even more complicated than that. You are a unique individual with a unique medical history that affects your chance of having a baby. That is why any calculation requires additional information such as: duration of infertility, severity of infertility, your age and a host of other factors.

“Success rates” are often advertised or heralded by the media showing that a particular program has the “best success rates” in a given area supporting their claims with comparative data from publicly available data sources. Unfortunately few reporters or patients ask “How is this really calculated?” and instead choose to believe in miracle workers. While there are many talented individuals in the IVF field, there are no individuals, neither physicians nor embryologists with supernatural powers.

What is really going on? To understand, we must keep in mind one of the essential principles of statistics. That is, statistics report data from POPULATIONS. Samples are taken, and averages are calculated. But, you are a PATIENT, not a POPULATION. You have a UNIQUE set of circumstances that will determine you own likelihood of achieving a pregnancy if you receive your medical care in an experienced IVF center. So, the key to good statistics is to have more ideal patients than difficult patients enter the program. To a large degree, the difference between a program with good statistics and one with less favorable pregnancy rates is more often due to the given mix of patients who present for treatment. Yet by excluding or wait-listing individuals who’ve failed in other programs, are over 38 years old, have borderline FSH values, have prolonged unexplained infertility, or are low responders certain programs can improve their statistics. By encouraging ART treatments for patients who are young, have had previous normal or ectopic pregnancies, regular menstrual cycles, limited or no prior treatment and have normal sperm factors, the advertised pregnancy rates can also be increased. The pregnancy rates also depend on the number of pre-embryos transferred. A program that transfers a larger number of pre-embryos will likely report a higher pregnancy rate than one that judiciously restricts that number but the latter program will also experience far fewer complications due to multiple births.

So, how can couples with complex fertility problems make an informed choice? Unfortunately, the answer is not simple. You cannot rely solely on published statistics when seeking professional care. The misguided focus on “success rates” has created strong incentives, economic and otherwise, for IVF programs to maximize IVF statistics adopting some of the “gaming” tactics noted above. A better approach might be to:

- Look for experience and track record. Participation in SART, CLIA, embryology certification and state licensure should be considered.
- Develop your own sense of their integrity, intelligence, responsiveness, and compassion.
- Learn as much as you can. Review the reputation of the organization and its professionals.
- Try to contact former patients. Talk to your friends with infertility problems.
- Refuse to be directed anywhere by a health care plan. Fight for your right to choose. Insist upon alternatives.
- Be willing to spend your own money wisely to get the best health care.
- Distrust waiting lists. Avoid apparent economic bargains. Ignore gimmicks.
- Lastly, think hard and trust your own judgment. Your health care is very important, and the final decisions are yours!

Notwithstanding all of the above concerns, for those of you who are still interested in POPULATION statistics the following is submitted for review:

ARHC ART Results

(9/97-5/98)

	<i>% per Stim Start</i>	<i>% per Retrieval</i>	<i>% per Transfer</i>
Stimulation Starts	100%		
Cancellations	27%		
Retrievals	73%	100%	
Replacements	55%	75%	100%
Pos. hCG	41%	56%	75%
Pos. Ongoing	36%	50%	67%

THE EMOTIONAL EFFECTS OF INFERTILITY

ON THE COUPLE RELATIONSHIP

Men and women are affected by infertility in different ways. Most couples experience the struggle in much the same way. This is related to the traditional ways men and women have been trained to think, feel, and act.

Women are typically seen (by others as well as themselves) as the emotional caretakers or providers of the relationship. Women typically feel responsible not only for everyone's bad feelings, but also for anything bad that happens. When women try to repress feelings, their emotions can become more ominous, until finally they feel out of control. Their emotions can become a monster about to swallow them whole.

Women in infertile couples often protect their husbands (*from their own pain and feelings of failure*) by taking much of the responsibility for the treatments upon themselves. When I suggest that men accompany their wives for appointments, couples get concerned about issues like income loss, use of time, etc. While these concerns are usually relevant and important, they also serve the purpose of protecting husbands from their own responsibility (*taking part in the conception process*) and from their own feelings, which could easily be intensified by so much contact with the medical process.

Men are traditionally seen as the financial providers of the relationship and are responsible for protecting the family from real or imagined dangers. Men usually feel more threatened expressing themselves since they've often been conditioned to repress their emotions. They are trained to be more instructional: to take charge, to make decisions, and to think without being sidetracked by emotions.

Males in infertile couples often feel overwhelmed by the intensity of their partner's emotions as well as an inability to access their own. They tend to focus their energy back into their work, a place where they feel they can have more success.

As a result of taking responsibility for the emotional impact of the infertility, the woman experiences intense feelings, such as: pain, anger, fear, etc. which, combined with the messages that her way of dealing with things is in some way dysfunctional or 'crazy', causes her to feel an anxious depression. As feelings spill out, she feels out of control and doesn't really know how to ask for what she needs, especially from the husband she is struggling so hard to protect. She may yearn for an emotional connection/interaction at one moment, and in the next, withdraw emotionally from her husband when she fears she has disappointed him.

Men find themselves in a position where, regardless how well they've been trained to solve problems, they are helpless to make this situation better for the woman and, as a result, may give off messages that she is "too" emotional or sensitive, hoping that this will calm her down. The wife hears this as criticism of her coping and caretaking skills rather than as an expression of her husband's fears.

This is the time when couples cling together for dear life, feeling that they've failed in the most basic of all roles: reproduction. Couples are hesitant to admit problems in their marriage, feeling that having difficulty coping would mean that their marriage is also a failure.

Luckily, there are ways that men and women can help each other balance thinking and feeling as they struggle side by side on their journey toward parenthood. The questions then arise: How then get what you need from your partner...How to be there for your partner? Here are some suggestions to help both partners during the infertility process:

- ❑ More open communication helps.

- ❑ Realize there's no right or wrong way to feel. Getting in touch with your feelings will help you know what you need. Once needs are identified, clearly and specifically tell your partner how to give it to you.
- ❑ Ask your partner what she/he needs rather than assuming that you can/cannot give it.
- ❑ Recognize the differences between men and women.
- ❑ See if you can teach each other some of the skills you've learned from your own life experiences as man or woman.
- ❑ Share more In the process of treatment. Share both the burdens and joys of your different perceptions/experiences of infertility. It will help to balance the intensity and bring you closer with a deeper respect for each other.

COPING STRATEGIES

(HOW YOU CAN SURVIVE YOUR FERTILITY TREATMENTS)

Part of the problem of "coping" with infertility is that we all have the notion that we should do it gracefully, with a minimum of tears and hysterics.

But, who told us *that* was coping? Who made the rules that said don't cry *too* much; don't show your feelings *too* much; don't let your feelings affect your work or relationships at all?

The next Important question is, why do we accept these rules? What's wrong with having our feelings? Grief is a natural process. Infertility is an on-going stressful crisis where we repeatedly experience grief. In short, it's a terrible experience we wouldn't wish on our worst enemies (*most of the time, that is*).

People can't experience fertility problems without being affected emotionally unless their feelings are so well protected that they're not in touch with them. Don't put yourself down because you get upset. Learn *now* that your reaction is normal. You've chosen the coping style that you know best. But, you can make things better. Start by identifying the positives about your coping style. Focus on how well you're doing. Give yourself lots of strokes for how well you've succeeded. For instance, many women put themselves down for feeling the need to talk to people a lot. Well, using support systems an excellent way of dealing with stressful life experiences. Most people don't know how to deal with such intense pain. So give yourself positive self talk about how good you are at reaching out for help. If you can't find the positives in what you are doing ask a friend, your partner. There's always a way.

Infertility often creates or exacerbates marital conflict. Find time to talk about it and decide if it's conflict within your relationship or if it's created by your infertility experience. Talk about the ways you've solved problems before and see if any of these work. If not, ask friends what they've done or seek out counseling. It is normal for marriages to have problems during this time. If you can survive this crisis together you can handle just about anything.

Friends and family members often seem insensitive and say or do things out of their ignorance, discomfort, or feelings of helplessness. Educate them when you are strong enough. Tell them how you feel. By explaining your feelings and letting people know how to help you will often get what you need. i.e., "I really appreciate your wanting to offer advice. But, right now I have enough advice and what I need most is someone to listen and try to understand," is an expression of what many infertility patients feel, but cannot communicate. Don't wait until you are in crisis or you'll tend to talk yourself out of dealing with them and they'll never learn what you need from them.

Medical caregivers have feelings about your infertility also and may react in a number of ways which may or may not feel good to you. Give them feedback about what feels good and what doesn't so they learn, and so your anger and resentment don't build. You'll be helping yourself right now and contributing to other infertile couples In the future.

Co-workers and employers may react also in hurtful ways or not understand your need for time off, your emotional ups and downs. Educate them where you can. Find supports in your workplace. Imagine you have another illness that doesn't have the social stigma of infertility and give yourself as much permission as you would in that situation to use your time as medically recommended, and expect others to honor this as well.

Remember what you've done in the past to make it through difficult times and see if it can work for you now as well: find time to have fun, read books, do nice things for yourself, buy things, meet new people, take exciting classes. Learn to do something you've always been afraid to try, develop a sense of humor about the infertility *experience (this actually can be done on your better days)*, use this time to develop deeper and more intimate relationships with your partner and others you care for, go for counseling, join a support group at RESOLVE, get online or do anything else your heart desires. You deserve it!

INFORMED CONSENT

PSYCHOLOGICAL CONSENT FOR ASSISTED REPRODUCTION PARTICIPANTS

I give _____ permission for all information in the assessment to be discussed with the physicians and staff at Atlanta Reproductive Health Centre and for the assessment to become part of my medical file.

PSYCHOLOGICAL EVALUATION

I understand that this psychological evaluation may involve psychological testing and will include discussions of my psychosocial history, current mental status, current level of support from significant others, marital satisfaction, and psychological well-being. I understand that the evaluation process and the discussion of life experiences can be emotionally distressing. Psychological responses to the evaluation process may be, but are not limited to: anxiety, depression, frustration/anger, distress, or disappointment especially if it is decided either by my self or by the program that I not proceed with IVF (in vitro fertilization) as planned. Psychological risks of either the psychological evaluation and IVF (in vitro fertilization) include but are not limited to: stress, interpersonal difficulties, conflicts with loved ones, impairment in daily functioning, sexual dysfunction or distress, anxiety or panic, depression, alteration of emotional well-being or triggering of traumatic memories especially involving physical or sexual abuse/trauma.

PSYCHOLOGICAL IMPACT OF REPRODUCTIVE TECHNOLOGIES

Procedures involving high levels of medical technology, including assisted reproductive technologies can be both physically and psychologically demanding. I understand that there are physical, psychological, and social risks involved in participating in IVF. These may include but are not limited to:

- **Psychological** stresses of the IVF process include the stress of the evaluation, the medical procedures, and future emotional reactions. Stresses of the process include managing the commitments of medical treatment, invasiveness of treatment, and stresses to relationships. Psychological risks of either the psychological evaluation or the IVF process include but are not limited to: stress, interpersonal difficulties, conflicts with loved ones, impairment in daily functioning, sexual dysfunction or distress, anxiety or panic, depression, alteration of emotional well-being or triggering of traumatic memories especially those involving physical or sexual abuse or trauma. In addition, I understand that some women experience psychological side effects to the ovulation induction medications.
- I have been informed that the IVF procedure itself may trigger past emotionally difficult experiences related to pregnancy, fertility, reproduction, sexuality, or family issues.
- If the procedure is not successful, I may respond with any number of emotional reactions including anger, disappointment, anxiety, depression, bitterness, or indignation. I also understand -that for some women the feelings of sadness and disappointment become overwhelming and unmanageable and that I am encouraged to return for additional support and assistance should this happen to me.
- If the procedure is successful I may feel predictable happiness and delight but also may feel disbelief and anxiety. I may feel fearful about the safety of the pregnancy or have difficulty attaching to it because of worry and fear. Furthermore, I understand that although IVF provides a means of becoming a parent, and as such a means of family building, it is not a cure for infertility and I may continue to experience emotional distress regarding infertility even if the donation process is successful.

- Depending upon my motivation and/or my experiences with the IVF procedure, I may not gain the degree of satisfaction that I initially expected. I may experience less gratification than I anticipated and the process may be less rewarding or more demanding than I envisioned.

SOCIAL AND RELATIONSHIP ASPECTS OF REPRODUCTIVE TECHNOLOGIES

- **Relationship** risks as a result of the IVF (in vitro fertilization) procedure include distress in either current or future relationships with my spouse, family and friends as well as strained social, familial, or work relationships. Marital relationships may be impacted by the stresses of intense medical treatment and may result in a variety of problems such as marital conflict or transient sexual problems.
- **Social** risks include conflict with religious leaders or religious doctrine or- the disapproval of friends, family, or others to assisted reproduction. I understand that others may not understand the IVF procedure, my motivations, or my participation in assisted reproduction and I may encounter disapproval, criticism, or censure. This may result in psychological distress including embarrassment, anger, resentment, or distress.

PHYSICAL IMPACT OF REPRODUCTIVE TECHNOLOGIES

- **Physical** aspects of the procedure may be psychologically demanding or stressful including injections and/or vaginal probe ultrasound. Possible health risks to me include transient physical discomfort, infection, reactions to ovulation induction medications, increased risk of ovarian cancer, or currently unknown factors which may affect my physical health now or in the future. I have had the opportunity to discuss the health risks of IVF with the physicians and staff and feel that I understand them. If any risks to my health should occur, I could experience a variety of psychological responses including anger, regret, guilt, anxiety, or depression or I may be at risk for the development of delayed emotional distress or illness at some point in the future. Furthermore, undiagnosed or pre-existing mental disorders may be exacerbated or triggered by the emotional strains of IVF.
- I understand that there is an increased risk of multiple gestation with this procedure and that there are significant risks to me and to the fetuses. Multiple or "super twin" pregnancies can be physically and psychologically demanding and the source of considerable physical and emotional strain especially if the pregnancy is complicated, there are complications in the babies, and/or the pregnancy is lost. The medical staff has discussed the risks of a complicated and/or multiple- pregnancy with me and I understand them. I also understand that multifetal reduction is sometimes a consideration and the medical staff has discussed this with me. Any number of psychological responses are normal and I understand that I am encouraged to return for or seek additional psychological support elsewhere if the outcome of this pregnancy involves multiple gestation, complicated pregnancy, premature delivery, and/or fetal loss.
- I understand that the IVF process may result in cryopreservation of "extra" embryos or embryos that are not transferred back at the time of the procedure. The process of cryopreservation has been discussed with me and I feel comfortable with the decision I have made regarding disposition of embryos my partner and I choose not to use. I understand that my options regarding the embryos that are not used by me include: disposal, donation for research, and donation to another couple. I understand that feelings about the embryos now and in the future may be significant and that I should not make any decisions that feel uncomfortable or in conflict with my personal or religious values.

IVF/ICSI: IN VITRO FERTILIZATION/INTRACYTOPLASMIC SPERM INJECTION

- I understand that there is some evidence of increased risk of birth defects specifically an elevated rate of chromosome anomalies in fetuses conceived via ICSI (*intracytoplasmic sperm injection*.) This increased risk may be due to genetic or inherited factors that caused the father's infertility necessitating the use of ICSI and, as

-a result, any offspring conceived as a result of ICSI may be at risk of inheriting the father's genetic disorder resulting in infertility or other unknown genetic disorders or problems in the offspring. I understand that either I or my partner may experience emotional distress, conflict, or regret should the outcome of the IVF/ICSI procedure be less than optimum and the child suffer inherited problems that either were or were not predictable.

FUTURE CONSIDERATIONS

Delayed psychological reactions to the IVF (in vitro fertilization) procedure could be triggered by recollections of the IVF (in vitro fertilization) process or by future life experiences including parenting any child(ren) born as a result of assisted reproductive technologies. Delayed reactions may include but are not limited to:

- Personal, social, religious, and legal attitudes IVF (in vitro fertilization) may change in the future influencing my feelings and attitudes regarding assisted reproduction or feelings about the child(ren). For example, although I feel positively about IVF (in vitro fertilization) at this time, but I may feel negatively about it in the future. Personal life events, such as other reproductive difficulties, parenting problems, or abnormalities in the offspring, may cause retrospective negative feelings about IVF and I may experience anger, regret, anxiety, or depression or may develop delayed emotional distress or illness. Furthermore, undiagnosed or pre-existing mental disorders may be exacerbated or triggered by the emotional strains the IVF process.
- I am aware that assisted reproductive technology is a relatively new medical field and is, to a large extent, ahead of social attitudes, law and legal precedent, and medical and social ethics. Knowledge of the long-term psychological and social consequences of IVF or participation in assisted reproductive technology is limited but what is known has been discussed with me. I may experience unanticipated psychological distress especially if attitudes and beliefs about IVF are different than current conventional wisdom or accepted practice.
- I understand that this evaluation does not address the legal, ethical, or religious ramifications of this procedure and that legal issues regarding IVF have not been fully addressed. Should I have any questions regarding these areas it is recommended that I obtain legal or religious counsel.

Consent

- I understand the risks, have been fully informed of them, and freely assume them.
- I acknowledge that the psychologist is not responsible for predicting or ensuring my current or future emotional responses or well-being.
- I also appreciate that there is no certainty that I will achieve any benefit from this evaluation and that there is no guarantee that the outcome of the evaluation or the outcome of the IVF procedure will be a positive one.

I have read and reviewed the above and received a copy of this consent.

IVF participant

Date

Spouse/partner of IVF participant

Evaluator/witness

PRE-IVF SEMEN ANALYSIS

ARHC is dedicated. Although you may already have a recent semen analysis report available, in order to insure the best possible number of fertilized eggs, we require that an IVF semen analysis be performed at Atlanta Reproductive Health Centre. The Center operates andrology and endocrinology laboratories to support its assisted reproductive technologies. The staff of the Center will work closely with your physician to coordinate your care and provide you and your wife complete urological and assisted reproductive technology services.

How To Schedule an Appointment:

Call (404) 265-3662 (between 8:00 a.m. and 4:30 p.m.) to make the appointment. Appointments are available from 8:00 to 11:00 am.. Monday through Friday.

What to Expect During Your Appointment:

- | | |
|--------|---|
| Step 1 | When you arrive you will be asked to sign in at the front desk. Tell the receptionist that you have an appointment for an IVF semen analysis |
| Step 2 | You will be called to come back to the lab area where you will be shown into one of the specimen collection rooms. |
| Step 4 | You will then be provided with additional instructions on specimen collection. The specimen collection rooms are set up to provide you a private and comfortable environment in which to produce the specimen. The rooms are equipped with magazines to help you study before the sperm test. |

Requirements for Producing a Specimen at Home for Drop Off at the Laboratory

We prefer that the specimen be collected at ARHC, however, if this is uncomfortable or inconvenient for you it may be acceptable for you to collect the specimen at another location and deliver it to the laboratory. In order to do this you must adhere to the following guidelines.

1. You will need to deliver the specimen at your appointment time. Let the scheduler know that you will drop off the specimen so the laboratory is prepared to perform the analysis immediately.
2. You must be able to deliver the specimen within one hour of ejaculation (consider traffic and travel distance).
3. You must have a suitable sterile specimen container (sterile and non-toxic to sperm). You or your spouse may pick up a specimen container from the laboratory ahead of time or you can purchase a sterile specimen cup (like the ones used for urine specimens) from a pharmacy.
4. You must follow the instructions below to ensure that the specimen does not become contaminated, which could yield incorrect results.
5. Label the specimen cup with your name and place the sealed specimen cup in a paper bag. Protect the specimen from extremes in temperature and from sunlight during transport. It is best to keep the specimen at 75° to 85° F during transport.

Requirements For Proper Collection of a Specimen

Refrain from ejaculation for 2 to 4 days before producing the specimen for analysis. Longer or shorter periods of abstinence will result in specimens that yield incorrect indications and are not acceptable for analysis.

The semen specimen should be produced by masturbation. Wash your genitals and hands to minimize the chance of contamination of the specimen. Do not use lubricants or saliva when masturbating since potential toxicity to the sperm can adversely influence the results. Collect the ejaculate directly into the specimen cup and replace the lid immediately to prevent contamination. Do not produce the specimen by coitus interruptus (having intercourse and withdrawing the penis prior to ejaculation) or by oral sex. Both activities can lead to a suboptimal specimen, which may yield falsely abnormal semen analysis results.

Do not collect the specimen with a regular condom since they contain chemicals, which are toxic to sperm. If masturbation is absolutely unacceptable to you, please obtain a special semen collection device from ARHC. These devices consist of a special nontoxic condom and a test tube for transporting the semen to the laboratory. There is also a small funnel to use in transferring the semen from the condom into the test tube and detailed instructions on how to use the device. You and your spouse may use this device in the specimen collection room at ARHC if this is convenient for you.

Notes

Try not to sit in hot tubs or spas during the three months before the treatment cycle.

Use of drugs, alcohol, cigarettes or chewing tobacco should be kept to an absolute minimum during the three months before the treatment cycle. In some cases, the treatment may need to be postponed if a herpes lesion is present at the time of semen collection.

If you have a fever of 101o F or higher within three months before the treatment cycle, sperm quality may be adversely affected. The sperm count and motility may appear normal, but fertilization may not occur. If you become sick, please take your temperature morning and night and take Tylenol every four hours to keep your temperature down. Report the fever to your nurse.

Laboratory Tests

IVF Semen Analysis This test provides an indication of how your semen compares with the general population. The following parameters are measured in a semen analysis: volume and consistency of semen, sperm count, percentage of sperm that are progressively motile (moving in a straight line), the strict morphology (structural appearance) of the sperm and sperm survival. A semen analysis does not diagnose fertility or infertility but provides a relative measure of semen quality compared to the general population of men. It can suggest possible conditions associated with reduce fertilization at IVF and indicate the need for ICSI.

Reporting Test Results

Allow at least seven days for your physician to receive and review your test result.

Sperm Cryopreservation

Sperm can be frozen and stored for future use either in artificial insemination or in vitro fertilization (IVF). Arrangements for this are made with Xytex, a local sperm bank. This frozen sperm can be used as a backup should future ability to produce viable sperm be diminished. Some reasons for considering sperm cryopreservation include: as a precaution when undergoing cancer therapy, and pr or to a vasectomy if there is a possibility that you may want to have children in the future. Furthermore, during vasovasotomy or testicular biopsy, it is wise to freeze a specimen of the sperm which is available at the time of the procedure to avoid the potential need for a second surgery. Specimens obtained during surgery will contain low numbers of sperm and can be used only in conjunction with IVF with intracytoplasmic sperm injection (ICSI).

How Many Specimens Should be Frozen? This is decided on a case by case basis depending on the reason for freezing the semen and the semen quality. If semen quality is poor, it is likely that the frozen specimen can be used only in IVF. When this is the case a single ejaculate is usually as good as several ejaculates since very few sperm are needed for IVF. A single specimen can be frozen in multiple vials for use in multiple IVF attempts. If semen quality is very good and a single ejaculate produces enough sperm for several inseminations, then freezing several ejaculates is a wise option. Although freezing several ejaculates costs more initially, the use of the frozen specimen in artificial insemination is much less expense, less invasive and has far fewer risks associated with it than the use of IVF.

Requirements Before semen can be frozen a consent agreement must be completed. The consent agreement outlines the responsibilities of the laboratory and of you in the process of maintaining the frozen specimen(s). Specimen collection requirements are the same as described above with special attention to collecting a clean specimen free of contamination.

ADVANCED REPRODUCTIVE TECHNOLOGY (IVF-ET)

PATIENT INSTRUCTIONS

INTRODUCTION

We recommend that you read these instructions entirely as soon as you can, making notations in the margins about any area where you have questions. As you approach each step we recommend that you re-read that particular section and ask any questions at that time. This will prevent you from becoming confused with too many answers at one time.

It is important to remember that each patient has her own unique response to the medications she receives and that each ART cycle is different. This means, not only are you unlikely to respond as others do, but you may actually respond differently from one cycle to the next. For this reason, you will find that your treatment and testing differs from those of other patients. Please do not compare your test results and medication plans with others to whom you may speak. Although you may find much in common with other patients here, please keep in mind that IVF is a very private matter and that some patients do not feel comfortable discussing this.

The schedule you find here is to help guide you through your treatment cycle. Time changes and other adjustments will frequently be made in order to individualize your treatment.

PRE-CYCLE COUNSELING

We recommend that when your period begins, on the cycle preceding the one you choose to undergo in vitro fertilization, that you contact the IVF nurse coordinator at (404) 265-3662 for approval to start. At this time, arrangements will be made to complete any pre-cycle testing, provide you with the necessary prescriptions for medications, complete the appropriate informed consent documents, and review and clarify your financial obligations. Separate consent forms are available for IVF, embryo freezing and micromanipulation. All consent forms must be signed by you and your partner, prior to initiating your treatment cycle. You will have an IVF teaching appointment at which time you will meet with both the doctor and nurse to review these documents and have any questions answered. You are to avoid the possibility of pregnancy during this cycle by using contraception.

MAXIMIZING CHANCES FOR SUCCESS

Females:

- Avoid all medications other than Tylenol. If you are taking other prescription medications check with us prior to beginning your treatment cycle.
- No smoking or alcohol use. Studies show both can result in lower pregnancy rates and a greater risk of miscarriage. Why put yourself through this if you are not doing everything YOU can to insure your success.
- No more than two caffeinated beverages per day.
- Avoid change in diet or weight loss or fad diets during IVF cycle. A healthy well balanced diet works best.
- Refrain from intercourse three to four days prior to egg retrieval and following embryo replacement until pregnancy determination is made.
- Normal exercise may continue unless enlargement of your ovaries produces discomfort.
- Avoid hot tubs or saunas.

Males:

- Fever greater than 100.4° one to two months prior to IVF treatment may adversely effect sperm quality. Be sure to let us know. If you are sick, please take your temperature and report any febrile illnesses.
- Sitting in hot tubs and saunas is not recommended. Even a single episode in the hot tub can adversely effect sperm function. Please refrain from this for at least three months prior to treatment.
- Drugs, alcohol, and cigarette smoking should be avoided for three months prior to treatment and at all times during the ongoing IVF treatment cycle to get the best results.
- If you have a history of genital herpes infection, you must report any pre-herpes symptoms, active lesions, or healing herpes lesions. In either the male or the female, each of these stages will require cessation of the IVF treatment .
- Do not begin any new exercise sport or marathon training within three months of planning IVF. If you are a runner, please decrease jogging to a total of less than 20 miles a week.
- Refrain from wearing tight underwear.
- Abstain from intercourse for at least three days, but not more than seven days prior to collection of semen for egg collection and during treatment.

IVF TREATMENT

Treatment begins during the menstrual cycle before your planned treatment with urine ovulation predictor testing. When an LH-surge (*color change*) is noted, call the office. You will be asked to report to the office for an ultrasound examination to evaluate the mid-cycle development of the uterine lining and for a trial transfer. This procedure consists of a pelvic examination and placement of a tiny catheter inside the uterus to determine the direction and length of the uterine cavity prior to your treatment cycle. This procedure minimizes trauma to the uterine lining during your actual IVF treatment cycle and may enhance pregnancy rates.

You are to avoid the possibility of pregnancy during this cycle by using barrier contraception. Approximately seven days after the surge you will begin therapy with subcutaneous Lupron. This will continue for a period of about ten days, but maybe longer if necessary. You may be asked to return to the office for an estradiol value and ultrasound examination. If these tests are normal, you will initiate gonadotropin injections (Pergonal, Metrodin, Follistim, Gonal-F or Humegon) within several days. Alternatively, you will complete the mid-cycle ultrasound and trial transfer earlier. The month before you IVF treatment you will be placed on oral contraceptives and begin subcutaneous Lupron two weeks later. After finishing the pack of oral contraceptives the baseline ultrasound will be scheduled.

The first day of medication will be considered day one of your cycle. All consent forms must be signed and deposits must be paid prior to receiving medication and further instructions. Your treatment may stop at any stage if the medical team feels that successful completion of treatment is unlikely. A credit or refund may be due if you do not complete your treatment cycle. Specific instructions regarding drug doses and upcoming appointments will be given.

OVULATION INDUCTION

The purpose of "super ovulating drugs" is to stimulate the ovaries to produce more than one egg. Humegon, Pergonal (hMG) and Metrodin, Follistim, Gonal-F (FSH) are given as an injection once or twice a day to recruit multiple eggs. This will require you to make arrangements with someone (husband or friend) to give you your injections. Arrangements should be made prior to initiation of your therapy to teach him/her how to mix the drugs and give the injections.

After receiving injections for approximately five days, a transvaginal ultrasound will be performed at the Atlanta Reproductive Health Centre. You will be asked to empty your bladder and proceed to the examining room. There, you will undress from the waist down. A vaginal transducer will be inserted into your vagina. This procedure is not uncomfortable. You may experience some vaginal discharge after the procedure as transmission gel is used on the vaginal probe.

Ultrasound is a process whereby high frequency sound waves, not radiation, are transmitted through tissue. As the ultrasound waves strike the tissues they project a white image on the ultrasound screen. Follicles are round sacs of fluid within the ovaries. Therefore, the follicles appear as dark circles on the ultrasound screen. Hopefully, each follicle contains an egg. The eggs can not be seen. Sometimes the follicle has no eggs and sometimes the follicle contains more than one egg. The number of follicles, therefore, does not correspond to the number of eggs. We monitor follicular growth and also the number of follicles being produced.

Beginning approximately treatment day 6 you will undergo daily blood sampling to determine your estradiol level. This level is used to individualize your medication treatment for that afternoon and the following morning. Estradiol is produced by the lining of the follicle (fluid filled structure where the egg develops). In addition, a progesterone and LH determination may be made if your estradiol level is rising rapidly. If your progesterone level is also rising, administering hCG a day earlier may be advisable.

It is very important for you to be one time in the morning in order for your lab results to be available for physician review early in the afternoon. After review, you will be notified of any change in your medication dosages. It is very important not to quote numbers with other patients. This may cause you unnecessary anxiety. Each person is going to respond differently. We are not looking for specific numbers when we perform ultrasounds and run blood work. We are looking for the relationships between the blood work and the ultrasound findings. Your physician will review your results and you will be the first one to know if there is any problem.

When your physician determines that you are ready for retrieval, you will be given an injection of hCG (Preganyl, Profasi). This injection is given late in the evening approximately 37 hours prior to retrieval. This medication ripens the developing eggs and initiates ovulation. Ovulation occurs about 42 to 48 hours from the time of injection if you do not have an egg-retrieval procedure. Many patients experience abdominal discomfort after the hCG due to ovarian enlargement and are convinced that they are ovulating. Rest assured that we are monitoring you very closely and the chance of ovulating prior to retrieval is extremely slim, and almost zero if you are receiving Lupron.

Sexual abstinence too long before retrieval (more than five days), or relations too close to retrieval (24 hours) could possibly decrease the quality of the semen sample. If you did not have sexual relations the day before hCG, we recommend that you do the day of hCG. If your husband has a low sperm count you may need a four to five day period of abstinence. Discuss this with your physician early in your cycle.

MEDICATIONS

Lupron (leuprolide acetate) is an analog of gonadotropin releasing hormone (GnRH). When given as a subcutaneous (*just below the skin*) injection, it will stimulate the "turning-off" of your pituitary gland. We are able to take advantage of the suppressive actions to improve the recruitment of multiple follicles and prevent premature ovulation. Room temperature storage is advised. Be sure not to keep each vial past the expiration date. One vial will provide approximately four weeks of injections.

Side effects are short term. Hot flashes may be felt when your estrogen level lowers and will disappear when you begin gonadotropin injections. Occasionally patients experience headaches as well.

A consistent time within the same hour each day should be chosen to give the injection. Lupron comes in a kit with alcohol wipes, small syringes, and one container of medicine. However, the supplies can be carried in your purse and the shot can be conveniently given in a couple of minutes.

Lupron Injection Instructions:

1. Wash and dry hands thoroughly.
2. Assemble supplies: two alcohol wipes, one Kleenex, one syringe, medication.
3. At first use, remove and discard plastic cap off the medication.
4. Cleanse the Lupron vial with an alcohol wipe.
5. Remove cap from syringe exposing needle.
6. Pull the syringe plunger back until its' tip is at the proper dose mark. Insert needle straight and firmly into the rubber center of the vial and push the plunger all the way in.
7. Turn the vial upside down.
8. Pull the syringe plunger down filling the medication slightly below the line adding 0.2cc (or 0.1cc if that is your dose) and remove from the vial.
9. Hold the syringe needle up and flick with finger to remove any air bubbles.
10. Hold the syringe and new alcohol wipe in the right hand.
11. Choose injection site rotating sides daily. Pinch the skin gently with the left hand.
12. Wipe area then save wipe to wipe the area again after the injection.
13. Holding the syringe like a dart, perpendicular to the skin, briskly insert small needle quickly and entirely into the skin.
14. Slowly inject all medication, release the pinch and remove syringe covering area with alcohol wipe then Kleenex.
15. When you begin gonadotropin injections, Lupron dosage will usually decrease to half (*0.5mg*) or be discontinued. Medication may continue through the day of hCG administration or may be terminated when you begin gonadotropin injections.

Injectable Gonadotropins: **Humegon, Pergonal** are brand names for **hMG**. They are similar drugs. hMG is a combination of the hormones FSH (follicular stimulating) and LH (luteinizing). **Metrodin, Follistim & Gonal-F** contain only FSH. They effect the ovaries directly to rescue multiple follicles before normal selection of a single dominant follicle. While Metrodin is available only by intramuscular injection, Follistim and Gonal-F which are a highly purified form of FSH, may be given as a less painful subcutaneous (*under the skin*) injection.

Side effects may include abdominal distention/discomfort, bloating sensation, mood swings, fatigue, or restlessness which is relieved in most cases by follicular aspiration. Multiple births may be seen with this medication.

The medication comes in ampules of powder or vials which need to be diluted with water. Several such ampules or vials are combined into just one syringe with a single water (diluent).

Humegon\Metrodin\Pergonal Intramuscular Injection:

1. Wash and dry hands thoroughly.
2. Assemble supplies: one syringe, one 25 gauge, 1.5" needle, one 22 gauge, 1.5" needle, two alcohol wipes, one Kleenex, one ampule of water, and the designated ampules of medication.
3. Unwrap supplies.
4. Attach syringe to a 22 gauge, 1.5" needle.

5. Using an alcohol wipe, cover finger and thumb and snap open all glass ampules. For Humegon, remove the plastic protective caps and wipe the rubber stopper. Insert the needle through the rubber stopper.
6. Remove needle cover and draw 1 cc of water into the syringe then distribute between the powder and ampules. It dissolves immediately.
7. Fill the syringe with all the medication by inserting the needle as far into the ampule as possible and at an angle then pulling back the syringe plunger. Stop before it reaches the end of the syringe, even if there is more medication. Push the syringe straight up and flick firmly with the finger. Remove all excess air in syringe.
8. Change needles to the thinner 25 gauge, 1.5"needle and express a drop of medication.
9. Hold syringe and new alcohol wipe in the right hand.
10. Select injection site, rotating sides for comfort. Pinch your skin gently with the left hand. Standing on the opposite leg relaxes the muscle to be used.
11. Wipe skin with alcohol then slide under left thumb.
12. Hold syringe like a dart, perpendicular to the skin, insert needle quickly to 1 1/2" of depth to pass the skin and fat to the muscle.
13. Slowly inject medication and withdraw the needle swiftly.
14. Slide alcohol wipe over the area then Kleenex.
15. All supplies are discarded in a milk carton or strong containers after single use. You may also place all needles in a glass jar with a dilute bleach solution.

Gonal-F / Follistim subcutaneous Injection:

1. Wash and dry hands thoroughly.
2. Assemble supplies: one 3 cc syringe, one 25 gauge, 1.5"needle, one 25 gauge, 5/8"needle, two alcohol wipes, one Kleenex, one ampule or vial of water, and the designated ampules of medication.
3. Using an alcohol wipe, cover finger and thumb and snap open all glass ampules or remove the plastic cover over the vial's rubber stopper.
4. Remove needle cover and draw 0.5cc of water (1 cc for Follistim) into the syringe then distribute between the powder and ampules. It dissolves immediately.
5. Slowly turn the vial upside down, the medication will not run out. Fill the syringe with all the medication by inserting the needle as far into the ampule as possible and at an angle then pulling back the syringe plunger. Stop before it reaches the end of the syringe, even if there is more medication. Push the syringe straight up and flick firmly with the finger. Remove all excess air in the syringe.
6. Switch to the shorter (5/8th inch) 25 gauge, 1.5"needle.
7. Hold the syringe needle up and flick with finger to remove any air bubbles.
8. Hold the syringe and new alcohol wipe in the right hand.
9. Choose injection site rotating sides daily. Pinch skin gently with the left hand.
10. Wipe area then save wipe to wipe the area again after the injection.
11. Holding the syringe like a dart, perpendicular to the skin, briskly insert small needle quickly and just under the skin.
12. Slowly inject all medication, release the pinch and remove syringe covering area with alcohol wipe then Kleenex.

Human chorionic gonadotropin (hCG, brand name Pregnyl, Profasi) is a hormone closely similar in its biologic effect to LH which normally induces ovulation. hCG initiates follicular changes triggering ovulation approximately 42 to 48 hours later. Retrieval must occur before ovulation or the follicles will be empty. hCG is also secreted by the placenta during pregnancy. hCG is available only by intramuscular injection. Room temperature storage is adequate prior to dilution. The powder is diluted just prior to injecting.

Side effects similar to those encountered with the above mentioned medications may be briefly noticed.

hCG Injection:

1. Timing of hCG is critical and should be performed within 30 minutes of the designated time.
2. Wash and dry hands thoroughly.
3. Assemble supplies: one 3 cc syringe, one 22 gauge, 1.5" needle and one 25 gauge, 1.5"needle, 2 alcohol wipes, one Kleenex, and medication.
4. Remove all wrappings, snap off plastic caps from medication.
5. Attach syringe and needle. Pull the syringe plunger back until its tip is at the proper dose mark. (1cc or 1ml)
6. Wipe each vial with alcohol wipes.
7. Remove cover from the needle, insert straight and firmly into the center rubber top of the water. Push the plunger all the way in.
8. Turn the vial upside down.
9. Pull plunger of syringe to fill to 1cc of water then remove.
10. Insert water into the powder and gently roll between hands with needle inside. The powder dissolves rapidly. Holding the vial upside down, slowly lower the needle between the rubber sides to obtain all the medication, then remove the needle.
11. Remove air bubbles from the syringe by firmly flicking with a finger.
12. Change needle to a 25 gauge, 1.5"needle.
13. Choose injection site, as done for injectable gonadotropins and Pinch skin with the left hand.
14. Hold syringe and alcohol wipe in right hand.
15. Wipe skin and slide alcohol wipe under left thumb.
16. Hold syringe like a dart, perpendicular to the skin, inject 1 1/2" and quickly inject medication then withdraw needle briskly.
17. Slide alcohol wipe over the area then Kleenex.
18. Dispose supplies safely in a strong container.

EGG RETRIEVAL

You should have nothing to eat or drink in the eight hours prior to your retrieval. This procedure begins in the same fashion as vaginal ultrasound. You will receive small doses of medication given intravenously, which will make you relaxed and sleepy. In addition, a local anesthetic will be used in the vagina.

Recovery from these drugs, for most patients, is rapid and generally nausea is minimal. Your vagina will be cleansed to minimize the risk of infection. The vaginal transducer is inserted into your vagina and the eggs are retrieved with a needle inserted through the vaginal wall under the guidance of ultrasound. No abdominal incisions are required.

Under special circumstances, if your physician feels your retrieval may be difficult due to severe pelvic adhesions, a laparoscopic retrieval may be recommended. As we do not know the effects of anesthesia on the eggs, we will try to avoid administering anesthetic agents or any other drugs until the last minute. This means you will not have any pre-anesthesia medication. You will go into the operating room fully conscious and will be prepared for surgery before the anesthesia starts. Once asleep, the laparoscope is inserted through a small incision in your belly button. The eggs are again retrieved with a needle that is inserted through the laparoscope directly into the ovary. Also, one or two small incisions may be made in your pubic hair line to place instruments into your abdomen to stabilize your ovary.

PRE-RETRIEVAL INSTRUCTIONS:

Report to ARHC at your assigned time. **DO NOT EAT OR DRINK ANYTHING AFTER MIDNIGHT.**

When you arrive, tell the clerk that you are an IVF retrieval patient, and let her know what time you are posted for surgery. Please make sure to arrive without jewelry, nail polish, make-up, or contact lenses. You may wear your wedding rings.

Shortly before your retrieval an attendant will escort you to the preparation area. Please note that usually no preoperative sedatives are administered. While you are in the preparation area, please try to empty your bladder completely. If an epidural anesthesia is planned, the anesthesiologist will confer with you and answer any questions you may have regarding your anesthesia. When all is ready you will be taken into the procedure room and asked to lie on the procedure table. If you do not yet have an intravenous line, one will be started. Next you will receive medication to make you feel relaxed and drowsy, or you will receive medication to put you to sleep (as discussed earlier under anesthesia). The procedure will last about 25 to 45 minutes.

Your husband will be asked to provide a semen specimen before or immediately after the time of your retrieval.

If you are undergoing retrieval for IVF, your husband will be with you throughout the procedure and your recovery. If you are undergoing general anesthesia for a GIFT procedure, your husband will not be allowed to accompany you. However, following your initial recovery your husband may be with you. The time you will be required to remain for observation will vary between patients. IVF retrieval patients will generally stay approximately 60 minutes while patients who've had an epidural block or those undergoing the GIFT procedure will remain for approximately two or three hours. When the nurse feels that your condition is stable, you will be discharged. Patients are not allowed to drive themselves home after retrievals. Following your retrieval, you may eat or drink when you feel well enough. At this point, following your procedure, you should begin taking your antibiotic if you have not been instructed to start them earlier.

Sometimes when immature eggs are retrieved, male factor fertility is present, or if fertilization does not occur, your husband may be required to provide a second semen sample. This generally will occur the day after retrieval, but may occur later the same day. Arrangements will be made to contact him the morning following retrieval if this is necessary.

POST-RETRIEVAL INSTRUCTIONS

Following transvaginal ultrasound retrieval you may experience some pelvic area tenderness and feel tired or sleepy from the medications you've received during the procedure. You will also have some light vaginal spotting. This is usually from the vaginal wall where the local anesthetic was injected. This bleeding should be scant and may be red to brown in color.

If you had a laparoscopy, you will experience an ache in your abdomen and possibly some shoulder discomfort due to the use of carbon dioxide gas during the procedure. Extra-strength Tylenol usually controls the discomfort. Do not take aspirin or anti-inflammatory medication (Anaprox, etc.). You will have a small

incision in your navel and one or two small incisions just above your pubic bone. These incisions are covered with band-aids. Please keep the dressings dry. Two days after the surgery, you may remove the band-aids and shower as normal.

The medications used during you egg collection may not be eliminated by your body for up to 24 hours. You may feel "hung over" or just not your normal self. During this period we ask that you do not:

1. drive a car or operate machinery or power tools
2. drink any alcoholic beverages
3. make any important decisions

You may eat whatever you like after the egg collection, as long as you are not nauseated. If you experience nausea, restrict your diet to clear liquids and crackers until the nausea subsides. It is usually best to avoid spicy foods for at least 24 hours.

Antibiotic therapy (**tetracycline**) is administered to minimize the risk of infection following this procedure. An antibiotic is usually given four times daily immediately after your retrieval, the day after the retrieval, and early in the morning on the day of pre-embryo transfer.

Medrol, a steroid hormone is given for a period of four days to assist pre-embryo implantation.

Progesterone is a hormone produced by the remains of the ruptured follicle (corpus luteum). Progesterone helps the lining of the uterus become thick and is therefore, essential for the implantation of the pre-embryo. As estrogen levels are higher in stimulated ovarian cycles, it is necessary to administer progesterone supplements to establish a normal estrogen/progesterone ratio. . Therefore, hCG or additional progesterone supplements may improve the uterine lining and enhance the possibility of pre-embryo implantation. You will begin by taking a progesterone suppository rectally or vaginally on the evening of your egg retrieval. The next day you will add an oral troche (a tablet that dissolves in your mouth) in the morning and late afternoon and continue taking the evening suppository until you are contacted with the pregnancy test results. Following a positive pregnancy test result, the nurse will instruct you on continuing progesterone supplementation.

You will be contacted by the nurse on the day following your egg retrieval and given the status report on your eggs and sperm. At this time fertilization will be seen in most cases, but embryo replacement can only be confirmed when the fertilized egg divides normally, usually after one additional day. As you know, although rare, one of the risks of IVF is lack of fertilization. Sometimes the reason for this is understood but many times no reasons are apparent. If this occurs, monitoring will be discontinued. You will be given an opportunity to meet with your physician and or the embryologist regarding the implications of this finding. Having intercourse between retrieval and transfer is suggested and may improve implantation.

You should abstain from sexual intercourse for two weeks after the embryo. You should also abstain from strenuous physical activity during those two weeks. If you have any questions about a particular activity, please contact your physician.

Please contact your doctor if any of the following occur:

- fever greater than 100.4° f that lasts for more than two hours.
- excessive vaginal bleeding.
- unusual and increasing pelvic area discomfort.
- difficulty with urination or change in bowel activity.
- nausea, vomiting, or diarrhea.
- sharp or shooting pains.
- pain or burning on urination.
- abdominal swelling.

- unusual back pain.

EMBRYO TRANSFER / REPLACEMENT

On the day of your embryo replacement, report to the Atlanta Reproductive Health Centre approximately 15 to 20 minutes prior to your scheduled pre-embryo-transfer time. About an hour before the transfer, you will take a mild tranquilizer (**valium 10mg**) to help relax both you and minimize the risk that your uterus will expel the pre-embryos. While husbands are encouraged to be present, however, their presence is not imperative. However, you will need someone to drive you to and from the clinic. You will usually be asked to arrive with a full bladder.

The pre-embryo transfer procedure is similar to a pap smear. A speculum is inserted in to your vagina. An abdominal ultrasound examination is performed. Then a catheter and guide is inserted into the cervical canal and the catheter is fed into the uterus. Occasionally you may feel some cramps as the catheter is placed into the uterine cavity. The pre-embryos are then placed into the uterus. The embryologist then expects the catheter under a microscope to make sure that all the pre-embryos were transferred.

Pre-embryo transfer is usually a very short procedure. There is generally very little discomfort, if any at all. So RELAX! Following pre-embryo transfer, you will be able to dress and leave after the "ok" is given by the embryologist.

Following the procedure, you may get dressed and be driven home. You will NOT be able to drive yourself home. Please relax in bed the rest of the day, getting up only to use the bathroom. Please remember that you are to continue your progesterone (*and any other prescribed medications such heparin, estrogen, or baby aspirin*) until we have the results of your pregnancy test. Following transfer, some patients may pass a small amount bloody fluid or air from the vagina. Please do not worry about this, it does not mean that you are expelling the embryo(s). From the time of transfer until your pregnancy test you can resume most of your regular activities.

It is normal to blame yourself for something you may or may not have done during this time if your pregnancy test is negative. Therefore, in general, try not to do anything for which you will blame yourself if you are not pregnant. In general the following guidelines are offered:

- No tub baths or swimming for 48 hours after replacement.
- No douching.
- No tampons.
- No intercourse or orgasms until the fetal heartbeat is seen on ultrasound, or the pregnancy test is negative.
- No jogging, aerobics, tennis, skiing, mountain climbing, etc. (you get the idea).
- Do not begin any new physical activity.
- Do not taken any non-prescription medications or other prescribed medications without the approval of the IVF team.
- No heavy lifting.
- You may return to "work" after 24 hours of bed rest (getting up for bathroom and meals only) and one to two days of light activity.
- Try to keep busy; remaining mentally distracted will help the twelve days pass easier.

It is not unusual for you to have some vaginal spotting or bleeding prior to your pregnancy test. Approximately 50% of our pregnancy patients had spotting prior to pregnancy tests or even afterward. **THINK POSITIVE!** You must have the blood work drawn even if you think your period has started. Quantitative hCG pregnancy testing will be done.

PREGNANCY TESTING:

Quantitative hCG pregnancy testing will be done twelve days after the pre-embryo transfer. If, however, this falls on a weekend, in which case a Saturday test would be done on Friday and a Sunday test would be done on Monday. Arrangements will be made to have your blood drawn at ARHC between 7:30 a.m. and 9:00 a.m. If you live out of town, this may be done at your private physician's office and reported to us. The results will be called to you as soon as possible, usually in the afternoon.

Most of the testing reveals either positive or negative results; however, occasionally we see a test that is "weakly positive". If you have a "weakly positive" pregnancy test, this is seen in four situations.

1. Late but normal implantation of the embryo.
2. Discontinuing pregnancy.
3. Ectopic pregnancy.
4. Lab error.

Further hCG monitoring is extremely important in any of the above situations occur. Two days after an initial positive or weakly positive pregnancy test you will return for a second test. This blood work will enable us to determine if your pregnancy is beginning to progress along the normal course. We look for your hCG level to double every two to three days.

If your test is positive, we may switch to oral progesterone three times daily, a weekly progesterone injection or progesterone suppositories. An ultrasound examination will be performed approximately three to four weeks after your retrieval. This early ultrasound is critical to evaluate the possibility of miscarriage, ectopic pregnancy, and multiple pregnancies. An ectopic (tubal) pregnancy can occur in 2-4% of IVF pregnancies. If diagnosed early, this unfortunate complication may be treated as an outpatient with medication.

Once we determine the presence of fetal heart beat, we will refer you back to your obstetrician. If you do not have one we will be happy to make a recommendation.

If your pregnancy test is negative you may stop taking progesterone. You will get a period within three to five days, if you have not already started bleeding. This period may be different from your normal period (lighter, heavier, shorter, longer). If you do not get a period within one week, please call and return for blood work.

After investing so much time and money for your ART treatment failure to have fertilized eggs or a negative pregnancy test can be an abrupt shock. You may wish to make an appointment to meet with your physician to review your treatment and discuss your feelings with us. All that it may take to achieve your IVF success is time and another attempt.

TELEPHONE CALLS

The answering service has been instructed not to page the on-call staff after hours and on weekends unless you consider your call an emergency. However, patients who have had retrieval or surgery that day or the day prior with bleeding, temperature elevation, nausea and vomiting, or difficulty urinating should not hesitate to call and are considered emergencies. Calls regarding the beginning of your period, questions concerning instructions, prescription refills and appointments are not considered emergencies. Calls regarding the scheduling of appointments will not be returned after office hours.

Please keep in mind that some days are extremely busy, and most phone calls will be returned as soon as possible. However, some phone calls may not be returned until after hours or the next day. Our office hours are from 7:30 a.m. until 4:30 p.m. When leaving a phone message please let us know how long you will be available at that number and provide us with a number to reach you later in the day. If your call is emergent in nature, please keep your phone line open for a return call.

ATLANTA REPRODUCTIVE HEALTH CENTRE

PATIENT INSTRUCTIONS FOR LUPRON/ZOLADEX/SYNAREL SUPPRESSION

When your menstrual period begins, call ARHC to speak with Jennifer if she is available. If Jennifer is not available, please leave a message with date of first day of full flow of your menses. Leave your name and telephone number where you can be reached, and until what time you will be at that number. Also, mention that you are starting Lupron or receiving Zoladex for IVF.

Have blood drawn on day 1-3 of your cycle for FSH and estradiol levels at ARHC or a local lab drawing station. Schedule an injection instruction session with Jennifer when you are around ovulation (mid-cycle). This is anywhere between cycle day 10-16 depending on your cycle length.

Date of Pre-cycle Visit:_____ **Time:**_____

The first medication you will take is Lupron to temporarily suppress your hormones in preparation for ovulation induction medications.

Your Lupron Dose is:_____ **daily. Begin Lupron, Synarel or receive Zoladex on** _____

Please take Lupron within the an hour or two of the same time each day, preferably 4-8p.m. You will usually take Lupron for 10-14 days or longer. You must begin your menstrual period before proceeding with the next step in treatment. You will schedule and estradiol blood test and an ultrasound after your menses begins. (spotting counts here) but no sooner than 10 days after starting the Lupron. Zoladex is given in the office as a single injection.

If you don't have a menstrual period within 14 days of starting Lupron, schedule an ultrasound appointment.

Date of Baseline Estradiol and Ultrasound:_____ **Time:**_____

If your estradiol blood level is less than 50 pg/ml and the ovaries show no large cysts, you will begin treatment with injectable gonadotropins as ordered by Dr. Perloe.

You may be asked to reduce your Lupron dose to _____ after the ultrasound and continue taking it until: _____. Otherwise, you will stop taking Lupron when you begin the gonadotropin stimulation protocol.

Date to Begin Gonadotropin Stimulation Injections:_____

Please make sure you have this sheet with you at each appointment so that we may update your schedule as needed.

DATE																		
DAY OF CYCLE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
DAY																		
DRUGS-am																		
Humegon																		
Follistim/Gonal																		
DRUGS-pm																		
Humegon																		
Follistim/Gonal																		
Lupron																		
HCG																		
Ultrasound																		
LABS																		
E2																		
LH																		
Progesterone																		
Retrieval																		
Transfer																		

Begin subcutaneous Lupron: _____ Baseline US: _____ Gonadotropin Start Date: _____

Medications after retrieval: _____

Additional medications may be prescribed: ☐ T=tetracycline 250 mg orally 4 times daily; ☐ M=methylprednisolone 16mg orally four times daily;
☐ H=heparin 5000units SQ twice daily; ☐ B=Baby aspirin 80mg orally daily

Ultrasound post ransfer: _____

Pregnancy test will be performed approximately twelve days after retrieval. Results from samples obtained Friday or during the weekend may not be available until Monday afternoon. Please provide us with a telephone number to contact you between 2 p.m. and 6 p.m.

Mark Perloe, M.D., E. Scott Sills, Jennifer Clair, R.N.P., IVF Nurse Coordinator (404) 265-3662; fax (404) 265-4276

PATIENT INSTRUCTIONS

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IVF DIARY

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

QUESTIONS & ANSWERS

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

