Dear patient:

This handbook and video have been designed and utilized over the past 20 years with input from staff, educators and patients and it serves as an “all-inclusive” source of information for your IVF/ART process.

- Please read this handbook cover to cover and view the video as they have been designed to serve as a guide for each phase of your IVF/ART process.

- Keep this handbook accessible at all times.

In order for you to keep your costs down, we ask this handbook be used for answering questions as they arise. Fees will be applied for additional calls or inquires made to staff regarding information available in this material.
The Midwest Center for Reproductive Health, P.A. (MCRH) was founded in 1992, bringing together a group of innovative and specialized reproductive health care professionals, led by reproductive endocrinologist, Randle S. Corfman, Ph.D., M.D. The vision of The Midwest Center is to provide patients with state-of-the-art reproductive health care while maintaining a very personal and caring approach to patient care. Achieving this goal has been facilitated by combining cutting edge medical and surgical knowledge with high tech andrology and embryology skills. Holistic and specialized care is delivered by specially trained nurses, a health educator, and administrative staff. This synthesis provides a unique environment which we feel improves the quality of care and the quality of life for our patients while optimizing chances for pregnancy.

The andrology and embryology teams provide the latest technology in the assisted reproductive technologies, including micromanipulation of sperm, oocytes (eggs) and embryos. Currently, this includes intracytoplasmic sperm injection (ICSI) and assisted zona hatching (AZH) of embryos and preimplantation genetic diagnosis (PGD).

You will find that The Midwest Center excels in the area of patient education by providing an on-site educator. It is our belief that by educating our patients in the assisted reproductive technologies, we can better prepare them for participation in decision making. This active participation contributes to stress reduction while improving the quality of the experience. Our nursing staff also excels in the area of patient education and in coordinating treatment plans, helping you gain a better understanding of your infertility treatment. When appropriate, our nurses will maintain timely communication with satellite staff in order to ensure smooth and “seamless” transitions for patients traveling from great distances.

In the past, IVF has been perceived as one of the most stressful experiences a couple faces. We feel that we can help you minimize the stress, in part, by providing a social worker whom is particularly experienced in counseling couples struggling with infertility.

Meticulous preparation for IVF contributes greatly to the success experienced at The Midwest Center. We are committed to your success and feel strongly that much of the success experienced at The Midwest Center is a result of complete investigation of the infertile couple. Our IVF Coordinator specializes in assisting couples with all of the pre-IVF testing requirements. Each piece of
information is important in determining which treatment protocol will most likely result in pregnancy. While occasionally perceived as bothersome, we rely extensively upon the pre-IVF testing.

Finally, we are aware that the financial burden for completing IVF is substantial. Our business office will assist you in satisfying the financial requirements of the program, providing helpful and up-to-date information.

We are excited to have you participate in the assisted reproductive technologies at MCRH. We hope you will find our team approach complete, satisfying, and rewarding. We are eager to assist you as you embark upon this important journey.

The Midwest Center for Reproductive Health Staff
Facing IVF can be a daunting or overwhelming process for many people. The Midwest Center for Reproductive Health has instituted a support program called “FIT” (Facing It Together), for individuals or couples who would benefit from the support of someone who has previously been through the IVF process. If this program is of interest to you, please return this form and we will do our best to find you a match. Sharing of personal information is left to the discretion of the individuals themselves. Your first name and email address you provided is the only information given by MCRH.

If you have any additional questions, please contact the Nurseline at 763-494-7726.

I give permission to give my first name and email address to an individual chosen by the staff of Midwest Center for Reproductive Health:

__________________________________________________________________________
Patient’s name printed                                             Signature

__________________________________________________________________________
Spouse/Partner’s name                                             Signature

Date signed: ______________________

Email address: _____________________________________________

Please return to:

FIT Coordinator
Midwest Center for Reproductive Health
12000 Elm Creek Blvd. North
Suite #350
Maple Grove, MN 55369

Fax: 763-494-7706

Email: info@mcrh.com
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Section I

Introduction and Overview
UTERINE EMBRYO TRANSFER

Uterine embryo transfer is the transfer of embryos that were obtained from donated eggs and partner/donor sperm. Eggs and sperm are mixed in the laboratory and resulting embryos are incubated an additional 2-5 days after which they are transferred into the uterus through the cervix. Down regulation with Leuprolide Acetate (Lupron), is necessary as is hormone replacement of the uterine lining with estrogen. Estrogen preparations, Estrace (oral) or Estradiol Valerate (injectable) are taken, as well as Progesterone. Based upon your donor’s stimulation and when the uterine lining appears to be optimal for embryo implantation, the transfer will be scheduled.

Uterine embryo transfer (UET, as it will be referred to throughout this document) is a fairly simple procedure and is performed in a similar manner as an intrauterine insemination. The procedure is performed only during our “uptimes”.
Donor Oocyte Recipient Overview

Preparation

Clinical / Laboratory Requirements
- Blood type with Rh factor, HIV 1 and 2, Hepatitis B & C serology, VDRL antibody serology for both patient and partner
- Rubella and Varicella serology
- Lupus Anticoagulant and Anticardiolipin Antibody, if ordered
- Semen analysis if ordered by physician and semen cryopreservation (semen cryopreservation mandatory)
- Sonohysterogram/Uterine Profile, if indicated
- If no previous tubal evaluation, Hysterosalpingogram (HSG) or Laparoscopy if indicated

Team Member Interaction
- Third Party Coordinator: informs of and reviews screening requirements and consents
- MD: UET review, sonohysterogram/uterine profile, if indicated
- Embryologist: review gametology and embryology – per patient need
- Nursing: coordinate patient care and prescriptions
- Education: medication outline and injection techniques
- Business office: financial arrangements

Down Regulation
- Birth control pills: one tablet once daily as directed
- Norethindrone Acetate (Aygestin) one tablet once daily for 10-20 days
- Pituitary desensitization: GnRH agonist (Leuprolide Acetate (Lupron), subcutaneous injection) for a minimum of 10 days or until down regulation has been achieved
- Ultrasound and Estradiol (E$_2$)
  * All ultrasound and estradiol (E$_2$) results must be received in our office by 12:00 p.m. CST/CDT.

Hormone Replacement Therapy
- Estrace (oral) or Estrogen Patch as indicated
- Ultrasound and Estradiol (E$_2$) when indicated
- Progesterone suppositories
- Progesterone in oil
- Methylprednisolone (oral), if indicated

Retrieval of donor’s eggs, Partner/donor sperm processed, Fertilization attempted

Assisted Zona Hatching (AZH) variable

Embryo Transfer
- (approximately 2-5 days from initial progesterone administration)
- BhCG level
  * (approximately 14-16 days from embryo transfer)
- Ultrasound confirmation = Clinical Pregnancy per transfer
- Intrauterine Pregnancy
  * (approximately 21 days from positive BhCG level)
- Delivery = Delivery per transfer
  * (33 weeks)

Risks and Complications
- Ectopic Pregnancy
- Multiple Births
- Multi-fetal reduction
MCRH is a member of The Society for Assisted Reproductive Technology (SART). Membership requires complete documentation of all pregnancy outcomes and/or deliveries. This information also enables us to provide patients with updated statistics and information regarding our center. Cycle-specific data is reported to the Society for Assisted Reproductive Technology (SART) on a yearly basis for the purpose of publishing an annual report. All personal identifiers submitted are protected under the Privacy Act. Patient names are not reported to SART.

Additionally, SART will provide this data from your ART procedure to the Centers for Disease Control and Prevention (CDC). The 1992 Fertility Clinic Success Rate and Certification Act requires that CDC collect data on all assisted reproductive technology cycles performed in the United States annually and report success rates using these data. As sensitive information will be collected on you, CDC applied for and received an “assurance of confidentiality” for this project under the provisions of the Public Health Service Act, Section 308(d). This means that any information that CDC has that identifies you will not be disclosed to anyone else without your consent.

On a periodic basis, SART clinic programs will be reviewed by outside professional reviewers to validate information. Each patient may be contacted by the professional reviewers and asked to confirm information provided in the chart and/or database.
Section II

Guidelines

Lifestyle and Activity
GUIDELINES

General Information
Much of this information may have already been addressed along your treatment process, but to clarify our recommendations, the following guidelines are provided to optimize your treatment.

Office Phone Calls
Our nurses are available to answer specific questions and to refill medications during office hours (8:00 a.m. to 3:00 p.m. CST/CDT). They can be reached by calling (763) 494-7726.

The Midwest Center utilizes a confidential phone system to enhance our communications with you during your treatment cycle. Patients will receive a communication bulletin with their assigned personal identification number and the date to begin checking messages. Please access your private voicemail system daily between 3:00 p.m. and 4:00 p.m. CST/CDT during your treatment cycle. Patients can expect to receive messages on all monitoring days regarding test results and future treatment plans and occasionally, there may be other communications left for patients throughout their treatment cycle. If you have not received an anticipated message by 4:00 p.m. CST/CDT, please contact the nurse line at (763) 494-7726 for further instructions. Questions may then be answered during office hours.

After clinic hours and on weekends, non-emergency calls should be made to the nurses’ line at (763) 494-7726. Messages may be left at any time and will be addressed the following business morning by a nurse.

In case of an emergency, the nurses may be paged at (763) 494-7700. A nurse will return your call and appropriate medical direction will be given to you.

Any non-emergency pages after hours and on weekends will be billed appropriately.

We require that you have an answering machine/voice mail where we can leave detailed messages regarding medication and monitoring instructions as a backup to the confidential phone system.

With sincere sensitivity to all of our patients, we ask that those of you with small children not bring them along to appointments or procedures.

Phone Numbers:

General Office Phone ........................................................................................................ (763) 494-7700
Toll Free ............................................................................................................................ (800) 508-9763
Fax Number ..................................................................................................................... (763) 494-7706
Patient Voicemail Number ................................................................................................ (763) 494-7799
Toll Free ......................................................................................................................... (888) 253-MCRH

Under extremely rare cases, when you call (763) 494-7700 or (800) 508-9763 and cannot reach our clinic, you may hang up and dial our nurse on-call pager at (612) 613-2579 and enter your 10 digit phone number. This is to be used ONLY when unable to contact us by getting a busy signal on several attempts indicating our phone system is out of order.
LIFESTYLE/ACTIVITY

Exercise/Activity
You are encouraged to exercise with moderation. Walking and swimming are encouraged. **High impact aerobics/exercises should be avoided after transfer.** Hot tubs and saunas should not be used by men at least **two months prior to the IVF cycle and throughout treatment.** (This is especially true for males with low sperm counts). Women should avoid hot tubs and saunas after transfer.

Diet/Smoking/Alcohol Consumption/Caffeine
Healthy eating habits. All couples are **required to avoid smoking, secondary smoke and tobacco usage** as research indicates that it is harmful to the ovaries and sperm and has a negative impact on chances for conception and pregnancy. Couples are also **required to avoid the use of alcohol** throughout the treatment cycle. **Caffeine intake** should be minimal or avoided. Referrals to dietary and smoke cessation programs are available through The Midwest Center.

Medications
Over the counter medications that can be used throughout treatment include Tylenol, Actifed, Sudafed, and Robitussin. If additional medications and/or treatment are necessary, be sure your prescribing physician is aware that you are trying to achieve pregnancy. Please inform our staff of any prescription medications you are currently taking and of any medical conditions that may require additional attention (i.e. heart or thyroid condition, diabetes, or artificial joints).

Influenza Vaccination (Flu Shot)
Flu shots are recommended for anyone who is pregnant or attempting to conceive.

Travel
We request that any previous or future travel plans be discussed with the MCRH Team prior to your IVF cycle. A deferral of 6 months may be required to minimize the risk of ZIKA virus transmission. The MCRH Team will help determine if a potential deferral is necessary.
ASRM STATEMENT ON ZIKA VIRUS

February 9, 2016
by: ASRM Office of Public Affairs
Originally published in ASRM Press Release

The American Society for Reproductive Medicine is closely following developments related to the Zika virus. At this point, it seems clear the virus has implications for reproduction and that it can be transmitted through sexual activity and reproductive tissues.

We urge patients who are pregnant, who are considering becoming pregnant, or those who may be involved as donors or recipients of reproductive tissues to exercise caution.

Due to the rapidly evolving understanding of Zika, we strongly recommend that our members and their patients follow the information and recommendations made available from the Centers for Disease Control and Prevention (CDC). The CDC has issued “Level 2 Practice Enhanced Precautions” recommendations for certain areas, urging those pregnant or seeking to become pregnant to avoid travel to those areas, or use enhanced prevention and follow-up activities if such travel cannot be avoided.

That information is available on their web site http://www.cdc.gov/zika/

It is Dr. Corfman’s recommendation that both you and your partner avoid travel to those areas designated as cautionary for the ZIKA virus. Please refer to the CDC website for a list of these areas. If you or your spouse/partner have already travelled to one of these areas in the past 12 months, please discuss this with our MCRH team to determine the timeframe for proceeding with your treatment plan.

If you have additional questions regarding this information, please contact the MCRH Nurse line at (763) 494-7726.
What do I need to know about Zika virus and trying to have a baby?

**The Zika virus:**
- Is found in South America, North America, the Caribbean, and Singapore.
- There is currently no vaccine or medicine to prevent or treat Zika.
- Symptoms can be mild or not present, making it difficult to know if you have it.
- Is spread primarily through daytime-active mosquitoes.
- Can be transmitted through intimate sexual contact, blood transfusion, and from mother to fetus.

**What are symptoms of Zika virus?**
Common symptoms include fever, rash, joint pain, conjunctivitis (red eyes), muscle pain, and headache. The incubation period is likely just a few days and the symptoms last 2-7 days. But most people will not have symptoms.

**What about Zika virus and pregnancy?**
The World Health Organization (WHO) reports that the Zika virus can cause microcephaly when transmitted from mother to fetus. Microcephaly is a medical disorder where the head is smaller than normal and is associated with brain shrinkage and cell death, causing serious developmental problems in the child. Infection with Zika virus during pregnancy is also linked to miscarriage, impaired growth, eye defects, and hearing loss in the child.

**Should I be tested for Zika virus?**
A blood or urine test can confirm Zika infection. If Zika virus is found in the blood or urine, it is assumed to be present in semen or other bodily fluids, though there is no completely reliable commercially available test. A negative blood or urine test would not necessarily mean the virus is not present in semen or other bodily fluids. Testing of semen or vaginal fluids is not recommended to determine whether a person could pass Zika virus to their partner during sex because available tests are not yet reliable for these fluids.

When trying to get pregnant, women and men with possible exposure to Zika virus but without clinical illness can consider testing for Zika within 2 weeks of suspected exposure. However, this testing strategy will not necessarily guarantee they are not infected with Zika. Testing for Zika is not universally available or recommended and its cost is not always covered by insurance. Your healthcare provider should know what tests are available in your community, the limitations of these tests, which patients will be allowed testing, and whether testing is covered by insurance.

**Will the Zika virus affect my plans to undergo assisted reproduction procedures?**
For men and women planning pregnancy who live in an area of active transmission, the risk is always present due to continuous potential exposure. The safest option is to delay pregnancy, however, this is not always possible particularly in those women older than 35 years.

Individuals using only their own eggs and sperm should follow the same precautions as for a non-assisted pregnancy. For those using donated eggs, sperm, or embryos, the United States Food and Drug Administration (FDA) states: use of sperm, eggs, and embryos from living persons are not allowed if the donors:
- Had a diagnosis of Zika virus infection in the past 6 months
- Reside in or traveled to an area with active Zika virus transmission within the past 6 months
- Have had sex with a man within the past 6 months who, during the 6 months before this sexual contact:
  - Was diagnosed with Zika virus disease
  - Experienced an illness consistent with Zika virus disease
  - Or traveled to an area of active Zika virus transmission

If I’ve been infected, exposed, or think I might have been exposed to Zika virus, should I wait to get pregnant?
Guidance from the CDC, WHO, and ASRM about timing pregnancy is summarized in the table below.

**Other considerations:**
- In areas where Zika virus-carrying mosquitoes have been identified, women of reproductive age, particularly those who are attempting pregnancy, should take measures to prevent breeding of mosquitoes and prevent bites. For the latest information on minimizing Zika infections, please visit http://www.cdc.gov/zika/prevention/index.html.
- For the latest information about where the Zika virus-carrying mosquitoes have been found, please visit the CDC website at http://www.cdc.gov/zika/geoinfo/index.html.
- If you are using donated embryos, eggs, or sperm, you should consider the potential exposure of the embryos to Zika virus, particularly if they were frozen at a time before these screening processes were in effect.
- Laboratory techniques that have been used to prevent the transmission of other viruses, such as HIV, have not been shown to prevent Zika virus at this time.
- Information about Zika virus, including how it is transmitted, ways to test for it, and what effects it has on babies and adults, is changing daily. Guidance published today may not be accurate for counseling and treatment of individuals tomorrow. Check with your healthcare provider and the CDC and FDA for the latest information.

For more information on this and other reproductive health topics, visit www.ReproductiveFacts.org

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**Table:**

<table>
<thead>
<tr>
<th>Population</th>
<th>ASRM</th>
<th>WHO</th>
<th>CDC</th>
</tr>
</thead>
<tbody>
<tr>
<td>Those with symptoms</td>
<td>Wait 6 months</td>
<td>Wait 6 months</td>
<td>Men-wait 6 months Women-wait 8 weeks</td>
</tr>
<tr>
<td>Those with possible exposure, no symptoms, and a positive test</td>
<td>Wait 6 months</td>
<td>Wait 6 months</td>
<td>Men-wait 6 months Women-wait 8 weeks</td>
</tr>
<tr>
<td>Those with possible exposure, no symptoms, and a negative test</td>
<td>Wait 8 weeks</td>
<td>Wait 6 months</td>
<td>Men-wait 6 months Women-wait 8 weeks</td>
</tr>
<tr>
<td>Those with possible exposure, no symptoms, and no test</td>
<td>Wait 6 months</td>
<td>Wait 6 months</td>
<td>Men-wait 6 months Women-wait 8 weeks</td>
</tr>
</tbody>
</table>

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**Helpful links to information about Zika virus:**
- FDA: [http://www.fda.gov/NewsEvents/NewRooms/PressAnnouncements/ ucm488612.htm](http://www.fda.gov/NewsEvents/NewRooms/PressAnnouncements/ucm488612.htm)
Smoking and infertility

Can smoking affect my ability to have a child?
Most people understand that smoking increases the risk for heart, vascular, and lung disease. Many do not realize that smoking can also lead to problems with fertility in both men and women. Erectile dysfunction and pregnancy complication rates are also increased with smoking.

Will smoking affect my eggs or sperm?
Chemicals (such as nicotine, cyanide, and carbon monoxide) in cigarette smoke speed up the loss rate of eggs. Unfortunately, once eggs die off, they cannot regenerate or be replaced. This means that menopause occurs 1 to 4 years earlier in women who smoke (compared with non-smokers).

Male smokers can suffer decreased sperm quality with lower counts (numbers of sperm) and motility (sperm’s ability to move) and increased numbers of abnormally-shaped sperm. Smoking might also decrease the sperm’s ability to fertilize eggs.

How can smoking impact my ability to conceive?
Women who smoke do not conceive as efficiently as non-smokers. Infertility rates in both male and female smokers are about twice the rate of infertility found in non-smokers. The risk for fertility problems increases with the number of cigarettes smoked daily.

Even fertility treatments such as IVF may not be able to fully overcome smoking’s effects on fertility. Female smokers need more ovary-stimulating medications during IVF and still have fewer eggs at retrieval time and have 30% lower pregnancy rates compared with IVF patients who do not smoke.

Because smoking damages the genetic material in eggs and sperm, miscarriage and offspring birth-defect rates are higher among patients who smoke. Smokeless tobacco also leads to increased miscarriage rates. Women who smoke are more likely to conceive a chromosomally unhealthy pregnancy (such as a pregnancy affected by Down syndrome) than non-smoking mothers. Ectopic pregnancies and preterm labor also occur more often among female smokers.

Can smoking affect my children?
Men whose mothers smoked half a pack of cigarettes (or more) a day had lower sperm counts. Smoking during pregnancy also can lead to growth restriction of the baby before birth. Children born with lower-than-expected birth weights are at higher risk for medical problems later in life (such as diabetes, obesity, and cardiovascular disease). Children whose parents smoke are at increased risk for sudden infant death syndrome (SIDS) and for developing asthma.

I don’t smoke but my partner does. Could this secondhand smoke affect my fertility?
Women exposed to secondhand smoke can suffer all the above health risks.

If I stop smoking, will my chances for conceiving and having a healthy pregnancy improve?
Yes. Quitting smoking can improve fertility through the decrease of the egg supply cannot be reversed. The rate of pregnancy complications due to smoking decreases the longer a person has not smoked.

Quitting smoking can be very, very difficult but studies show that the chance for success is much higher if you work with your health-care provider and/or a support group. Sometimes, temporary use of a nicotine replacement (such as nicotine gum or patch) and/or prescription medication called bupropion can improve quitting smoking rates, and you can use these while trying to conceive, if needed. Though it generally isn’t advised to use these during pregnancy, you and your health-care provider might consider their use during pregnancy after weighing the risks and benefits.

Revised 2014
For more information on this and other reproductive health topics, visit www.ReproductiveFacts.org
Stress and infertility

It is not clear how exactly stress impacts fertility. It is not known whether high levels of stress can prevent pregnancy or affect a woman’s chance of conceiving. We do know that reducing stress provides a better quality of life during times of intense personal challenge.

What is stress?
Stress is often defined as an event that a person sees/feels is threatening. In order to protect itself, the body responds with a “fight or flight” response.

How can stress impact a fertility patient?
Sometimes, infertility patients respond to the stress of being unable to conceive by aggressively pursuing treatment and procedures. Other patients withdraw and isolate from family, friends, and community. Neither of these extremes is ideal for patients who seek to treat their infertility and build a family.

How can I reduce my stress?
Having less stress in your life while pursuing fertility treatment may not, in and of itself, result in a pregnancy. However, developing better coping strategies to manage stress related to an infertility diagnosis and treatment can help you feel more in control and improve your overall well-being.

It has been shown that stress does interfere with making rational and well-thought-out decisions. Reducing stress can allow patients to research, explore, and consider all the options available with a clearer mindset. By reducing stress, the pros and cons of one treatment course over another can be more effectively weighed and considered.

Reduced stress is good for your health. While no one expects patients to approach fertility treatment stress-free, finding ways to minimize stress while pursuing treatment can help. It is helpful for patients to look for ways to reduce the burden of infertility treatments and medical protocols.

There are many stress-reducing techniques; some of the more popular methods recommended to fertility patients are:
- Acupuncture
- Aerobic exercise (may be reduced during treatment)
- Collaboration with experts in stress reduction
- Guided imagery
- Journaling
- Listening to music
- Massage therapy
- Meditation
- Mind-body groups
- Mindfulness
- Progressive muscle relaxation
- Psychotherapy and cognitive behavioral therapy
- Self-help books
- Support/educational groups
- Visualization
- Walking/hiking
- Yoga

How can I help my friend/loved one?
Friends and loved ones are facing a challenge. Telling patients to be less stressed can make them feel more responsible for “causing” their own infertility and feel blamed. Telling someone to relax can cause greater stress. However, asking how couples/friends are doing and suggesting concrete and pragmatic ways to reduce stress will enhance quality of life and give the patient back some sense of control. For many struggling with infertility, just having friends/loved ones available for listening is greatly appreciated.

The goal of stress reduction is to minimize, not eliminate stress, by finding the technique that serves the patient’s needs the best.

Revised 2014

For more information on this and other reproductive health topics, visit www.ReproductiveFacts.org
Section III

Consent Forms
CONSENT FORMS

The following pages contain an example of the Midwest Center’s consent forms for a UET cycle. These are for your reference only. Prior to initiating treatment, you will receive a consent packet containing consents appropriate to your care. Please take time to review these in detail prior to signing so that any clarifications or questions you have may be answered.

These forms are mandatory and must be signed, witnessed, and returned by the designated date or treatment may be postponed.
The Midwest Center for Reproductive Health, P.A. (MCRH)
Consent for Assisted Reproductive Technology (ART)

- I/We have been informed of the assisted reproductive technology treatments available to us at MCRH, and it is our intention to proceed with my/our individualized treatment plan outlined by my/our physician. I/We further understand it is my/our responsibility to notify MCRH staff of any changes in my/our health status or prescribed medications throughout my/our treatment.

- I/We have read the handbook, viewed the video and fully understand their content. As with any medical procedure, I/we acknowledge there are risks of complications.

- I/We hereby consent to and authorize MCRH to perform routine diagnostic procedures, laboratory tests and treatment protocols necessary during my/our ART process. I/We have been given and understand the information regarding medications, the routes of administration and associated side effects.

- I/We understand that my/our physician has outlined specific treatment regarding methods of fertilization. I/We realize semen parameters may vary on the day of retrieval and therefore, are permitting MCRH staff to proceed with ICSI and/or RICSI as deemed medically necessary. Additionally, I/we have been given the option of cryopreservation of a backup semen specimen and understand the significance as outlined in the handbook. In the event the backup semen specimen was provided and not used on the day of retrieval, I/we understand this specimen will be stored for 6 months and then discarded without further notification.

- I/We understand that on the day of transfer, assisted zona hatching (AZH) will be performed if indicated. I/We understand and permit the transfer of the agreed upon number of embryos and allow cryopreservation of our additional embryos, unless specifically advised against by our physician. In addition, authorization is hereby given to MCRH staff to dispose of all non-viable or poor quality embryos, abnormally fertilized oocytes, and unfertilized oocytes in accordance with laboratory standards and regulations.

- I/We understand that MCRH is not a long term storage facility and therefore, I/we authorize the automatic transfer of our cryopreserved embryos to ReproTech and have completed the necessary ReproTech registration and agreement forms.

- I/We have been assured that all information regarding our treatment will be handled confidentially and neither our identity nor specific medical details will be revealed without our prior written consent. Specific anonymous medical details may be revealed in professional publications and to the SART licensing board as long as our identity is concealed. Data from our ART procedure will also be provided to the Center for Disease Control and Prevention (CDC). The 1992 Fertility Clinic Success Rate and Certification Act requires that CDC collect data on all assisted reproductive technology cycles performed in the United States annually and report success rates using these data. Additionally, we consent to having medical observers throughout this process for the purpose of advancing medical education.
• I/We have been given cost information and itemization and understand that if additional treatment or procedures are performed, they will be charged according to the variable costs listed, and I/we will be responsible for payment of these services.

• I/We shall keep MCRH informed at all times, in writing, of our current address and telephone numbers for any matter requiring notification. This consent is valid until new consents are signed or until MCRH is provided with and agrees to any changes in writing.

• I/We hereby waive, release and forever discharge MCRH, its officers, directors, employees, agents, and other representatives, from and against any and all claims, demands, charges, causes of action, liabilities, penalties, costs and expenses, including attorneys’ fees, that any third party or party to this Agreement may have, against MCRH, its officers, directors, employees, agents, and other representatives whether direct or indirect, foreseeable or unforeseeable, arising from, relating to or in connection with this Agreement unless caused by the intentional misconduct or gross negligence of MCRH. Further, the parties agree to protect, defend, indemnify, and hold harmless MCRH, its agents, attorney, any representatives, officers and employees, from and against any and all claims, demands, charges, causes of action, liabilities, penalties, costs and expenses, including attorneys’ fees, brought by any third party or party to this Agreement, and arising from, relating to, or in connection with this Agreement unless caused by the intentional misconduct or gross negligence of MCRH. In clarification of the foregoing, I/we understand and agree that (i) MCRH utilizes outside vendors for certain services associated with my/our treatment, including without limitation laboratory testing and diagnostics, and (ii) MCRH is not responsible for the acts and/or omissions of such third parties, and such third parties shall not be, (i) responsible for any third party service vendor, or/and (ii) negligent for its actions and/or other information/materials provided to MCRH by such third party service vendors in connection with my treatment. I/We acknowledge that MCRH is relying on this release and indemnification and, that but for this release and indemnification, MCRH would not enter into this Agreement.

• This agreement shall be binding upon each of us, our assigns, heirs, executors and administrators.
Consent for Recipients of Donated Oocytes:

We, ______________________ (Recipient “Wife/female”) and ___________________ (Recipient “Partner/Spouse”) have engaged the services of The Midwest Center for Reproductive Health, P.A. to perform in vitro fertilization of oocytes obtained from the ovaries of an oocyte donor using your partner’s or a donor’s sperm.

1. We certify that each of us is at least 21 years of age.

2. We hereby consent to being treated by the MCRH team involving any physicians, office staff and the laboratory personnel for in vitro fertilization (“IVF”). We understand that “oocyte” is the medical term for “egg,” and “embryo” is the term for a fertilized egg.

3. We understand that the participants in the oocyte donation procedure are the “Oocyte Donor” and ourselves (Wife/female and Spouse), with the Wife to be the recipient and carrier of any embryos which result.

4. We understand the purpose of our participation in the Donor Oocyte Program is to achieve a pregnancy resulting from the fertilization of donor oocytes by Partner’s (or donor in some cases) sperm and placement in the Wife/female’s uterus.

5. We understand that any oocytes taken from the Anonymous or Directed Oocyte Donor and sperm collected from the Partner (or donor sperm) will be mixed under the process of in vitro fertilization. If the oocyte(s) is fertilized and if it divides appropriately, the resulting embryo(s) will then be transferred in the Wife’s uterus.

6. We understand that the following is an outline of the oocyte donation procedures which will be followed:

   a. Administration of medication will be done to assist in timing of synchronization.
   
   b. The Wife will be placed on a hormone replacement protocol to prepare her uterus for the well timed placement of the fertilized oocytes. Treatment will utilize a suitable estrogen and progesterone regimen in a prescribed manner. The risks of taking these hormones are similar to the risks involved in taking birth control pills and include nausea, vomiting, headaches, mental depression, etc.
   
   c. Frequent blood tests and ultrasound studies of the Oocyte Donor to determine impending ovulation.
   
   d. The Oocyte Donor will undergo oocyte retrieval via ultrasound guided transvaginal-aspiration when her ovulatory process is at the appropriate stage as determined by the physician in order to obtain as many mature oocytes as possible from her ovaries.
   
   e. Mixture of the Donor’s oocytes with partner’s (or Sperm Donor’s) sperm in attempt to allow fertilization to occur.
f. Three to five days after oocyte retrieval, transfer of the embryo(s) into Wife’s uterus by means of a small plastic catheter inserted through the vagina and cervix and into the uterus will occur. Excess embryos may be frozen for transfer in subsequent cycles.

g. Frequent blood tests through the remainder of Wife/Female’s cycle to determine whether pregnancy has occurred. The hormone replacement protocol will be continued with pregnancy as prescribed.

7. We understand that there are no guarantees that the Wife/Female will become pregnant as a result of the oocyte donation procedures. Factors which may prevent a pregnancy include the following:
   a. Husband may be unable to obtain a semen specimen.
   b. No fertilization of the egg(s), or abnormal development once fertilized.
   c. The embryo(s) may not continue to develop or implant in the uterine lining after transfer into the Wife/Female’s uterus.

8. We understand that following the successful establishment of pregnancy, there is a possibility that the Wife will not carry the fetus to full term as a result of miscarriage, ectopic pregnancy (tubal pregnancy), stillbirth or selective reduction. We understand that should the Wife carry the fetus to full term, there are no guarantees that congenital abnormalities (birth defects) will not occur.

9. We understand that there is little information available regarding overall pregnancy rates in this specific type of procedure. We also understand that this oocyte donation program does not guarantee that its success rate will be similar to that of other programs.

10. We understand that there are certain known risks to being a recipient of donor oocytes, including pelvic infection, multiple pregnancy, ectopic pregnancy, stillbirth, and other complications of pregnancy, and that we have understood those as discussed in the Donor Oocyte Program materials sent to us. We acknowledge that there may also be other risks unknown at this time, and release The Midwest Center for Reproductive Health, P.A. from liability for such risks.

11. We understand that multiple births may occur and that the occurrence of multiple births increases when more than one embryo is placed in Wife’s uterus. The chance of pregnancy however is greatly increased with transfer of more than one embryo into the Wife’s uterus.

12. We hereby agree and acknowledge, that any embryo(s) which the IVF team determines as reasonable medical judgment as non-viable or otherwise not medically suitable for continued use in the Donor Oocyte Program, may be disposed of in accordance with The Midwest Center for Reproductive Health, P.A. policies. We understand that we may elect to have all medically suitable embryos implanted up to a maximum of four, and we may elect to have the excess embryos frozen. If we elect to not transfer all embryos, and do not have said excess embryos frozen, then we agree and acknowledge that all such embryos may be disposed of in accordance with The Midwest Center for Reproductive Health, P.A.’s policies.

13. We understand that insurance coverage for any or all of the oocyte donation procedures may not be available and that we are personally responsible, individually and collectively, for all medical and hospital expenses incurred by or for the partner, Wife, and Oocyte Donor in
connection with the IVF procedures. It is also understood that efforts were made to accumulate all costs related to this treatment on the financial disclosure that was initially given to us (Wife and Partner). We are aware that all costs are subject to change.

14. We understand that we are free to discontinue participation in the oocyte donation program at any time, either verbally or in writing and that our decision to discontinue participation will in no way prejudice other treatment that we may receive from The Midwest Center for Reproductive Health, P.A. We understand that once the oocytes are fertilized, we are the sole owners of the resulting embryos. We also understand, however, that if we decide to discontinue participation in the Donor Oocyte Program, we will personally be responsible for all expenses incurred during the period of time prior to such discontinuation and which relate to the Oocyte Donor and our treatment in the program.

15. We understand that this consent extends from the original period of our participation in the Donor Oocyte Program until the program is completed, or until we decide to discontinue participation.

16. We understand that should the results of our treatment or any aspect of it be published in medical or scientific journals, all reasonable precautions will be taken to protect our anonymity. We grant permission to the Donor Oocyte Team to publish statistics relating to our case in professional journals, provided our names are not used.

17. We understand that anonymity is required for the anonymous donor as well as for the recipient of the oocytes. The Anonymous Donor has signed a consent and agreement not to try under any circumstances to contact the recipient and is aware that absolutely no information will be given to her from this program concerning us (Wife and Partner). The Anonymous Donor has agreed to relinquish embryo(s) resulting from her donation of oocytes.

18. The donated oocytes may be from an anonymous or known individual. We understand the donor will be queried about familial genetic disease, illegal drug use, and contagious diseases, but no guarantee about the reliability of the history given by the donor can be made. We agree that the Anonymous Oocyte Donor will remain unknown to us, and that we will not seek to learn of her identity.

19. We understand that our physician cannot guarantee the physical or mental characteristics of any child resulting from these procedures. We, for ourselves, and for our successors, offspring, and assigns, hereby release and agree to hold harmless from liability, complications resulting from insemination procedures, subsequent transfer to the Wife’s uterus and from pregnancy or childbirth; from any mental, emotional, or physical problems which may occur and from liability for physical or mental disability of children produced following these procedures or physicians, The Midwest Center for Reproductive Health, P.A., its staff, employees, agents officers, and directors.

20. The Oocyte Donor will agree to screening/testing, to attempt to detect any infectious disease(s) which might be transmittable to the recipient (Wife) as recommended by the American Society for Reproductive Medicine. As of May 25, 2005, all tissue/oocyte donors must also be found eligible to proceed under new regulations imposed by the US Food and Drug Administration (FDA.) All donors of oocytes will be tested for infectious diseases within 30 days of the oocyte retrieval. All tests must be reviewed and the results found to be negative in order to proceed with an embryo transfer. The Oocyte Donor will also be psychologically screened with a licensed Social Worker, and urine toxicology completed to screen for illegal drug use. We understand that any potential donor will be rejected for donation if any of these tests are positive.
or if the psychological tests indicate other than altruistic reasons for oocyte donation. However, we understand that these tests are not 100% accurate and that The Midwest Center for Reproductive Health, P.A. does not in any way guarantee that the results of such tests are accurate or the actual physical condition of the donor.

21. We understand that the Oocyte Donor will be counseled to abstain from sexual activity during the cycle of egg donation but her abstaining from sexual activity cannot be assured.

22. We agree to release the Oocyte Donor and The Midwest Center for Reproductive Health, P.A. from any legal or financial responsibilities from an established pregnancy or medical cost related to that pregnancy and delivery. We also release the Oocyte Donor and The Midwest Center for Reproductive Health, P.A. from any financial and legal responsibility for the delivered child from birth until death of that child and for the support of that child. We also release the Oocyte Donor, The Midwest Center for Reproductive Health, P.A., and its staff, employees, agents, officers, and directors from any financial or legal responsibilities for any birth defects or mental health disorders related to the oocyte donation process, pregnancy, or childbirth.

23. We understand that the Oocyte Donor may have complications from the superovulation of her ovaries. We understand that the risks have been explained to her and she has signed a consent form. The risks are:
   a. Ovarian Hyperstimulation Syndrome: symptoms are accumulation of fluid and abdominal discomfort, weight gain, headaches, nausea and vomiting. Most cases of hyperstimulation syndrome are very mild and resolve shortly after retrieval. Some cases are more severe and may even result in death. This complication affects less than 5% of women in whom ovulation is induced in this way.
   b. Ovarian torsion or twisting
   c. Injury to the surrounding organs during surgery.
   d. Bleeding.
   e. Infection.
   f. Possible increased risk of ovarian tumors.

We understand these complications are a potential for anyone going through this procedure. We understand that either the Oocyte Donor’s own medical insurance or the insurance policy administered by the program (purchased by us) will cover any medical costs related to complications from ovulation induction and oocyte retrieval (except for costs associated with psychotherapy, HIV, or resulting pregnancy in the Oocyte Donor). We understand that neither The Midwest Center for Reproductive Health, P.A. nor we, will be responsible for lost wages of the Oocyte Donor. We understand that the donor has been explained the above information and has agreed and signed a consent form.

24. We understand that the donor has been counseled that when the cycle has begun, it is morally responsible for her to complete the cycle to the best of her ability. If circumstances beyond her control occur (i.e. automobile accident, death in family requiring travel, etc.), we understand the cycle will be cancelled and an attempt to find us another donor will be undertaken.
25. We understand and acknowledge that The Midwest Center for Reproductive Health, P.A., or its staff, employees, or agents have not undertaken hereby or in any other document or oral communication to advise us of our legal rights, now existing or hereafter arising, and specifically disclaim any responsibility to do so. We understand that The Midwest Center for Reproductive Health, P.A. recommends that we consult legal counsel, so as to be fully informed of our legal rights and obligations of others involved in this procedure; but if we elect not to do so, such election is hereby acknowledged to have been determined without reliance upon statements, oral or written, of The Midwest Center for Reproductive Health, P.A., its staff, employees, agents, officers, and directors.

26. We release The Midwest Center for Reproductive Health, P.A. its staff, employees, agents, officers, and directors from all liabilities related to the recruiting of the anonymous donors from the surrounding community.

27. We have read and understand all the material regarding the Donor Oocyte Program at The Midwest Center for Reproductive Health.

28. We have read and understand this consent form. All questions that we asked have been answered in a satisfactory manner.

29. For the purpose of advancing medical education, we consent to having medical observers view the procedure/treatment.

On the basis of the 29 statements above, we agree to participate in the Donor Oocyte Program as a recipient of donated oocytes. We accept anonymous donor # AD___________ and agree to undergo the prescribed treatments in order to achieve our desired outcome of pregnancy, and accept the risks described and unknown.
Section IV

Program/Testing Requirements
CYCLE PREPARATION/TESTING

In attempts to provide information for patients, complete testing, and alleviate some of the stresses involved with your treatment cycle, you will receive extensive education regarding the in vitro fertilization process. You will have the opportunity to view a video explaining the entire IVF process as well as risks and complications. Throughout your treatment, detailed instruction will be provided by staff members outlining your individualized treatment plan.

Information in the video includes the following:

- Barrier contraception/abstinence
- Infectious Disease Testing (VDRL, HIV 1 and 2, Hepatitis B, VDRL, Hepatitis C, HTLV I and II antibody)
- Types of medications (down regulation, stimulation, hCG, luteal support) and route of administration
- Monitoring – Ultrasounds and Estradiols
- Semen sample collection
- **Mandatory** Cryopreservation of semen (back-up for IVF)
- Discarding semen sample after 6 months
- Retrieval - method, risks and complications
- # Follicles/ # Eggs/ # Embryos
- Fertilization - normal/polyspermic
- Assisted Zona Hatching (AZH)
- Intracytoplasmic Sperm Injection (ICSI)
- Cryopreservation of embryos
- Blastocyst Transfer
- Transfer method/ # of embryos to transfer
- BhCG, OB ultrasound

**Outcomes/Complications**

- Ovarian cancer
- Ovarian hyperstimulation syndrome
- Cancellation: Premature surge, suboptimal estradiol or follicles
- Multifetal reduction
- Multiple gestation / ectopic pregnancy / miscarriage
- Identical twinning
- Possibility of genetic anomalies
This form is an example of the checklist completed by Midwest Center staff and filed in your chart.

THE MIDWEST CENTER FOR REPRODUCTIVE HEALTH, P.A.
DONOR RECIPIENT/GC MEDICATION OUTLINE

PATIENT NAME:___________________________ PARTNER NAME:___________________________

Date prepped:_______________By:___________________ Series: ________

______IVF video viewed
______Answering Machine/Voicemail system
______Barrier contraception/abstinence month prior to IVF medications
______Medication Outline
______Kardex Monitoring Sheet
______Copy of Previous ART Monitoring sheet
______Current Medical Conditions/Medications
______Medication allergies for ______ patient and ______ partner
______Injection experience discussed/direction provided re: training

Current Medications

Prescriptions
______Norethindrone 5mg tablets, #20, refills x 1
______Leuprolide Acetate (Lupron) 2.8 ml vial, #___, refills x ___
______Estrace 1 mg #100, refills x 3, or ______ Estradiol Transdermal Patch 0.1 mg #48, refills x 3
______Prenatal Plus Vitamins #100, refills x 1
______Spouse/Partner Doxycycline 100mg tablets, #32, refills x 1
______Doxycycline 100mg tablets, #10, refills x 1
______Progesterone in Oil 50 mg/ml (10 ml vial), #4, refills x 4
______Methylprednisolone 4 mg tablets, #16, refills 1
______Lovenox 30 mg at time of _________, 2 week supply, refills x 4
______Glucophage (Metformin ER), 750 mg tablets, #120, refills x 2
______Vaginal Progesteron e Suppositories 200 mg, #80, refills x 4
______Endometrin 100 mg, #90, refills x 4

If Satellite
______Satellite Location: __________________     Contact Person: ______________________
______Outline Sent by ______________________ Date __________________
______Monitoring requirements__________sent to patient__________reviewed with patient

______Informed to call business office with any questions.
______Informed to contact educators with injection questions.

______Patient verbalizes understanding of information presented.
______Above instructed by __________________Date:__________Units:_____

By phone:       Y           N
PROGRAM REQUIREMENTS

The following procedures and blood tests are requirements and recommendations of both our clinic and the American Society for Reproductive Medicine for participation in our assisted reproductive program. It is necessary for all testing to be completed and reports to be in our office before any medications will be initiated.

FEMALE TESTING

Procedures

- **Sonohysterogram** (within one year of a UET cycle or if a pregnancy loss has occurred since the last test was performed)
  A procedure in which sterile water is inserted via a catheter into the uterus. By then placing an ultrasound probe into the vagina, this allows any potential abnormalities to be outlined and identified on an ultrasound monitor. If a defect is found and a follow-up procedure is necessary, this may alter the timing of your UET cycle.

- **Uterine profile** (within one year of a UET cycle) - *performed by Dr. Corfman at office visit or via ultrasound pictures for satellite patients*
  For uterine evaluations performed in the office, a catheter will be inserted through the cervix and into the uterus to determine the correct placement of the embryos at the time of the embryo transfer. Knowing this information will also diminish any cramping or bleeding at the time of the embryo transfer.

  **Please note:** In the month this is scheduled, **barrier contraception or abstinence** from intercourse is required.

If an evaluation of the fallopian tubes has never been performed:

- **Hysterosalpingogram (HSG)** (if indicated by physician)
  An x-ray study in which a contrast dye is placed into the uterus to show the contour of the uterine cavity and patency of the tubes (if they are present).

  **OR**

- **Laparoscopy**
  An examination of the outside of the uterus, tubes and ovaries. It is done on an outpatient basis under general anesthesia.

**May be indicated by Dr. Corfman as a pre-screening requirement:**

- **Mammogram**

  **Women ≥ 42 years of age** must undergo an evaluation to detect underlying heart disease. The incidence of cardiovascular compromise increases significantly in women 40 years of age and over due to increased cardiac output in pregnancy. The cardiac evaluation should be done by someone other than your OB/GYN (i.e. cardiologist, perinatologist, or internist). The evaluation should include an **electrocardiogram (EKG)** as well as any other tests indicated by your physician. In addition, a cardiac clearance letter must be obtained from a cardiologist, perinatologist, or internist and forwarded to our office in order to proceed.

**BMI**- A BMI of ≤ 30 is required in order to be placed in an IVF cycle.
FEMALE TESTING

**Blood Tests**

- **Rubella Immune Status**
  Rubella is a common infectious disease caused by a virus. About 1 in 7 women of child-bearing age in this country is still susceptible to Rubella. The lack of immunity can endanger the fetus if a woman contracts Rubella during pregnancy, especially during the first three months. This can result in miscarriage, stillbirth, or birth defects of numerous types.

  A blood test to determine Rubella immunity should be done during your fertility work-up. This titer will establish if an exposure to German measles and/or vaccination has occurred. If this immunity has not been established, there are risks associated if you should become pregnant.

  Because of the risks to the unborn baby, women of childbearing age should receive a vaccine only if they are not pregnant. Women should not become pregnant for four weeks after vaccination. Pregnant women should wait to get the MMR vaccine until after they have given birth. Women should not get the MMR vaccine if they have ever had a life-threatening allergic reaction to one of the following: gelatin, previous dose of MMR vaccine, or the antibiotic Neomycin.

  It is our recommendation that women who are not immune receive a vaccination and wait four weeks before attempting pregnancy.

- **Varicella Immune Status**
  Varicella, the primary infection associated with varicella zoster virus (VZR) or chicken pox, may cause serious maternal complications when contracted during pregnancy. In addition, it may lead to fetal varicella syndrome (FVS) or infection of the newborn. Infection of the fetus in the first or early second trimester or pregnancy may result in serious abnormalities including fetal limb atrophy, scarring of the fetal skin, and central nervous system deficiency. Therefore, a blood test to determine varicella immunity should be performed prior to initiating fertility treatment.

  It is our recommendation that women who are not immune receive the vaccination. This is a two-step vaccination, once the first dose is given the second dose is given 28 days later, you must wait 30 days after second dose before attempting pregnancy.

- **Blood type with Rh factor** (done once in a lifetime)
  In preparation for your upcoming treatment cycle, you will have a blood test to find out your blood type. As there are different blood types, there is also an Rh factor. The Rh factor is the type of protein on the red blood cells. When the Rh factor is present, an individual’s blood type is designated Rh+ (Rh positive); when the Rh factor is absent, the blood type is Rh- (Rh negative). If an Rh negative recipient chooses an Rh positive donor and conceives, it would constitute an Rh incompatibility. As this is a manageable condition, this would not exclude your potential donor from participating in your IVF cycle. The Midwest Center would make you aware of this incompatibility requiring further evaluation and treatment by your obstetrician should you have a successful outcome.

- **VDRL - syphilis screen (RPR, STS) (within one year of a UET cycle)**
  Syphilis is a sexually transmitted disease. This test is done for evidence of past exposure.

- **HIV 1 and 2** (acquired immune deficiency, AIDS)

- **Hepatitis B Core Total Antibody** (for patients using donor eggs, sperm or embryos)

- **Hepatitis B Surface Antigen** - regardless of immunization status

- **Hepatitis C Antibody** **

  Required within one year of a uterine embryo transfer cycle

  Please inform our staff if vaccination for or exposure to any of these diseases has occurred.

  ** These viruses can cause infection of the liver and lead to liver failure; therefore, testing will be done to ensure your health prior to your UET cycle.

If any of these test results are abnormal, you will be referred to an infectious disease specialist for further evaluation and your treatment will be delayed.

Please be advised that while some infectious disease testing is performed for your IVF cycle, not all diseases are screened for or tested. Communicable disease transmission is a possibility since bodily cells/fluids are involved in the IVF process. If you would like further discussion about communicable disease transmission, please set up a consult with your physician.
Immune System Evaluation

- Anticardiolipin Antibody (ACA)
- Lupus Anticoagulant (LAC)
- Beta 2 Glycoprotein Antibody 1
- Factor V Leiden

If a patient has experienced a previous pregnancy loss, additional evaluation of the immune system may be necessary to determine if an abnormal antibody production has occurred. These are blood tests ordered to determine the presence or absence of antibodies which may negatively impact chances for pregnancy.

It is thought that if any of these test results are positive, the woman receiving embryos may be producing antibodies that “attack” the placenta, causing blood clots to form. These blood clots may reduce transfer of nutrients from the mother to the fetus, jeopardizing the pregnancy.

Low dose aspirin and/or heparin may be prescribed to treat such at risk individuals by lowering the likelihood of blood clot formation at the placental implantation site.

- Antichlamydial Antibody

This blood test may be ordered if the patient has a history of Chlamydia, pelvic inflammatory disease, or hydrosalpinx. This test is necessary to determine if an antibody is present resulting from a previous Chlamydia exposure/infection.

It is thought that if these antibodies are present, the woman receiving embryos may develop antibodies that “attack” the placenta, causing blood clots to form, thereby reducing transfer of nutrients from the mother to the fetus. This might jeopardize the pregnancy.

Doxycycline, an antibiotic, may be prescribed as treatment for both patient and partner to treat a potential underlying infection. Low dose aspirin and/or heparin will be prescribed to treat such at risk individuals by lowering the likelihood of blood clot formation at the placenta.
MALE TESTING

Semen Analysis (within one year of IVF cycle)
Prior to ART/IVF procedures, a number of preparatory steps need to be performed. For the male, this requires the collection of at least one semen sample. The sample should be collected at MCRH or an approved off-site facility. A private, soundproofed room equipped with a VCR/DVD (visual materials are included) will be provided for the collection. This should be collected by masturbation in the sterile container provided. The sample should be collected after a 2-7 day abstinence period. The microscopic study of the semen sample will include the following:

Volume
The quantity of ejaculate. Quantities of ≥1.5 cc (or ml) are considered normal.

Sperm Density
This is simply a calculation of how many sperm are present in the sample. Values of >15 million sperm per milliliter are considered normal.

% Motility
This figure indicates the proportion of the sperm that are moving. A value of ≥40% is considered normal.

Morphology
This value is indicative of the sperm shape. A value of ≥15% is considered normal.

Presence of White Blood Cells
The presence of white blood cells is important as it may indicate the presence of infection. Such a situation must be corrected prior to undergoing ART/IVF. The antibiotic most commonly used to treat this is Doxycycline. It is an oral medication that is taken twice daily with meals. Photosensitivity is associated with the use of this drug; therefore, exposure to the sun and tanning devices should be avoided while using this medication.
Backup Cryopreservation of Semen Sample

Though optimal fertilization results are obtained when a fresh sample is used, it is mandatory to cryopreserve (freeze) an additional semen sample for “emergency IVF backup”. This cryopreserved sample could be used if a fresh sample cannot be obtained, or it may be used to augment a fresh sample of poor quality. If a backup sample is not provided and a semen sample is not available the day of egg retrieval, the in vitro process cannot proceed, and the eggs must be discarded.

There are risks associated with cryopreservation including possible failure of the equipment or mechanical support system, and possible damage to the sperm during the freezing and thawing process. Complications of pregnancy and childbirth including the possibility of the birth of an abnormal child (or children) may occur from a pregnancy following cryopreservation. However, available data suggests the risk associated with using cryopreserved semen is not greater than when using fresh semen.

In the event the cryopreserved sample is not used, it will be automatically discarded six months from the collection date without further notification.

For satellite patients wishing to consider the backup semen cryopreservation option, a kit with semen transport media is made available to you. This sample collection may take place in the convenience of your home. Arrangements to receive this kit can be made by calling The Midwest Center’s Reproductive Biology Laboratory at (763) 494-7716 or (800) 508-9763 option 6.

Prior to cryopreserving a semen sample, male infectious disease testing (HIV 1 and 2, Hepatitis B surface antigen, and Hepatitis C antibody) will be required and a negative result must be received by MCRH.

If you have tested positive for an infectious disease, you can still cryopreserve a back-up sample if you desire. MCRH lab does not have the capability to store an infectious sample and, therefore, we transfer the sample to Reprotech, Ltd. for long term storage. Additional paperwork must be completed for Reprotech to allow them to set up an account for your storage.

Reprotech Storage Fees for Infectious Semen Samples (subject to change)

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<tbody>
<tr>
<td>Quarterly</td>
<td>$113.00</td>
</tr>
<tr>
<td>Yearly</td>
<td>$413.00</td>
</tr>
</tbody>
</table>

A local courier would be used to send samples between MCRH and Reprotech. Approximate cost for the courier is $160.00 to have samples sent to RLT initially and then back to MCRH for IVF cycle.

There is an additional cost for cryopreservation and for a transport kit, if needed. Refer to the “Financial” section of this handbook under **Male Screening** for associated costs.
Blood Tests

- **Blood type with Rh factor** (done once in a lifetime)
  In preparation for your upcoming treatment cycle, you will have a blood test to find out your blood type. As there are different blood types, there is also an Rh factor. The Rh factor is the type of protein on the red blood cells. When the Rh factor is present, an individual’s blood type is designated Rh+ (Rh positive); when the Rh factor is absent, the blood type is Rh- (Rh negative). If an Rh negative female conceives using sperm from a male whom is Rh positive, it would constitute an Rh incompatibility. As this is a manageable condition, The Midwest Center would make you aware of this incompatibility requiring further evaluation and treatment by your obstetrician should you have a successful outcome.

- **VDRL** - syphilis screen (RPR, STS) (within one year of a UET cycle)
  Syphilis is a sexually transmitted disease. This test is done for evidence of past exposure.

- **HIV 1 and 2** (acquired immune deficiency, AIDS)
- **Hepatitis B Surface Antigen** ** - regardless of immunization status**
- **Hepatitis B Core Total Antibody**
- **Hepatitis C Antibody** **

Required within one year of a treatment cycle, including frozen embryo cycles.

Please inform our staff if vaccination for or exposure to any of these diseases has occurred.

** These viruses can cause infection of the liver and lead to liver failure; therefore, testing will be done to ensure your health prior to your IVF cycle.

If any of these test results are abnormal, you will be referred to an infectious disease specialist for further evaluation and your treatment will be delayed.

Please be advised that while some infectious disease testing is performed for your IVF cycle, not all diseases are screened for or tested. Communicable disease transmission is a possibility since bodily cells/fluids are involved in the IVF process. If you would like further discussion about communicable disease transmission, please set up a consult with your physician.
SEMEN TESTING FOR IVF PATIENTS:

The staff at MCRH wishes to provide you with the highest quality of care and understands the importance of semen testing. With this in mind, patients undergoing in vitro fertilization are required to have a semen analysis done within a specified time period.

For your convenience, you may elect to have this semen testing completed outside our office. However, due to the variability among andrology laboratories, it is necessary to first verify that the lab you desire can meet the following parameters for semen analysis. By verifying this prior to testing, unnecessary repeat testing and associated costs should be minimized. Listed below are the specific reporting parameters that MCRH requires for semen analysis and antisperm antibody assay. Please take this to your selected testing site to verify that their reporting capabilities meet our requirements.

Semen Analysis
According to the World Health Organization guidelines.
LATEX SENSITIVITY

Allergy to natural latex rubber has become a serious health risk for many health care professionals and patients. Allergic reactions to latex range from mild skin irritations to full body system involvement which may result in chronic illness, disability, or death.

MCRH has attempted to identify and minimize the use of latex-containing products where possible. We provide a "latex-safe" environment for patients and cannot guarantee a "latex-free" environment.

If you have a latex sensitivity and/or have had a previous reaction, we require testing be done through your physician/allergist. You will be given a medical release form granting medical approval to proceed. This must be completed by your physician and returned with the laboratory results in order to proceed through the treatment cycle.
Section V

Initiating Treatment and Down Regulation
PREPARATION FOR TREATMENT

To allow planning for your UET cycle, our center currently has “uptimes” approximately 5 times a year (2-3 weeks in length). It is during this time that your transfer will be performed. However, testing and medications will begin 2-3 months prior to your uterine embryo transfer.

Once medications are initiated, subsequent office visits are needed for the ultrasound monitoring of your response to these medications, as well as blood tests. Due to the number of visits in this 2-3 week period of treatment, flexibility in your schedule is needed. In an effort to provide you with timely information, please access your private voicemail system daily between 3:00 p.m. and 4:00 p.m. CST/CDT during your treatment cycle. Patients can expect to receive messages on all monitoring days regarding test results and future treatment plans and occasionally, there may be other communications left for patients throughout their treatment cycle. If you have not received an anticipated message by 4:00 p.m. CST/CDT, please contact the nurses. Questions may then be answered during office hours for your convenience. We require that you have an answering machine/voice mail where we can leave detailed messages regarding medication and monitoring instructions as a backup to the confidential phone system.

The monitoring of hormone replacement therapy is performed either at MCRH or one of our satellite clinics. Your embryo transfer will be performed at MCRH in Maple Grove, a northwestern suburb of Minneapolis, Minnesota.

TO BEGIN UET CYCLE

Please recognize there will be references made to three different types of days.

<table>
<thead>
<tr>
<th>Cycle Day</th>
<th>Relating to the day of your menstrual cycle</th>
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<tr>
<td>Down Regulation</td>
<td>Relating to the days on the birth control pill, Norethindrone Acetate (Aygestin) and Leuprolide Acetate (Lupron) for ovarian suppression</td>
</tr>
<tr>
<td>Hormone Replacement Therapy</td>
<td>Relating to the days on Leuprolide Acetate (Lupron) and medications to enhance endometrial lining</td>
</tr>
</tbody>
</table>

- Call the 3rd party coordinator at (763) 494-7762 with the onset of menses 2-3 cycles prior to your planned UET cycle.

- Since the adverse effects of these medications on a possible pregnancy are unknown, barrier contraception or abstinence is required upon starting the birth control pill. Patients are to abstain from vaginal intercourse after the start of hormone replacement therapy medications until documentation of fetal heart motion.

- Fill prescription(s) for the down regulation medications at least 2 weeks prior to initiating treatment.

You will be given your individualized medication outline prior to initiating treatment.
**DOWN REGULATION MEDICATIONS**

**Oral Contraception (Birth Control Pill)**
Patients may be placed on the birth control pill prior to initiating treatment. The intent of this medication is to suppress the system for a period of time to optimize response to the medications. If indicated, patients will be instructed by The Midwest Center staff when to begin the birth control pill. **This medication is not given as a form of birth control; therefore, patients must use barrier contraception or abstinence** throughout this time period. Light bleeding/spotting while on oral contraceptives is normal and you should continue taking the birth control pill as instructed. If you experience heavy bleeding, please contact our nurse line at (763) 494-7726. If you have previously taken birth control pills and have experienced a reaction in which you were advised to discontinue use, please contact our office prior to initiating oral contraception. Please make staff aware if you have a history of blood clots, hypertension, severe headaches, and/or if you smoke.

Common reactions to **oral contraceptives** may include visual changes, inability to wear contact lenses, fluid retention or bloating, elevated blood pressure, splotchy darkening of the skin called melasma, nausea, vomiting, change in appetite, headache, nervousness, depression, dizziness, loss of scalp hair, rash, and vaginal infection. The most serious dangers of oral contraceptives include heart attack, stroke, blood clots in lungs, legs, or eyes, increased risk of birth defects including heart and limb defects if taken by pregnant women, acceleration of the onset of gallbladder disease requiring surgery, and formation of tumors (rare, non-malignant tumors of the liver, cancer of the breast, cervix, vagina and liver has been reported in laboratory animals given estrogen). If you experience any of the following warning signals while taking oral contraceptives, please call our office: chest pain, shortness of breath, pain in the lower leg calf, headaches, vomiting, dizziness, disturbances of vision or speech, numbness in an extremity (arm or leg), stomach pain, and/or yellowing of the skin or eyeballs accompanied frequently by fever, fatigue, loss of appetite, dark colored urine, or light colored bowel movements. Please refer to the package insert for more detailed information on oral contraceptives and side effects.

**Norethindrone Acetate (Aygestin)** is a synthetic hormone similar to progesterone. It is a tablet given to shed the endometrial lining prior to initiating hormone replacement therapy medications. A menses generally occurs **one to four days** after discontinuing this medication. **However, bleeding/spotting while on Norethindrone is normal.**

**Leuprolide Acetate (Lupron)** is a synthetic hormone that mimics human gonadotropin releasing hormone (GnRH) by suppressing luteinizing hormone (LH). It is a subcutaneous injection given initially to **down regulate/suppress** the natural hormone from the pituitary gland. It helps to prevent spontaneous ovulation.

Side effects of **Norethindrone and Leuprolide Acetate (Lupron)** may include hot flashes, vaginal dryness, headaches, changes in mood, and decreased interest in sexual activity. Other less common side effects include dizziness, depression, arrhythmias, angina, peripheral edema, nausea and/or vomiting, increased liver enzyme levels, pulmonary embolism, and transient bone pain.
DOWN REGULATION

- Call our 3rd party coordinator at (763) 494-7762 with the onset of your period two to three months prior to your treatment cycle.

- If indicated, birth control pills will begin as instructed.

- Norethindrone Acetate (Aygestin) will begin as instructed.

- Leuprolide Acetate (Lupron) will begin as instructed. Refer to Leuprolide Acetate administration instructions.

- It is normal to experience vaginal bleeding of varying amounts during down regulation.

- To confirm that suppression has been achieved, a vaginal ultrasound and serum estradiol (blood test) will be performed.

- Once down regulation has been achieved, hormone replacement therapy medications will begin on the day instructed by The Midwest Center staff.

- Vaginal intercourse using condoms is permitted through your down regulation ultrasound and estradiol. Abstinence is required from the start of hormone replacement therapy medications until fetal heart motion is documented.

- Refer to Down Regulation outline.
Dear Patients:

It is our desire to continually improve our ability to serve your needs. Below please find a partial listing of resources that provide pharmaceutical supplies and medications. Please be aware that it is entirely your choice whether or not you utilize any of these services for your pharmaceutical needs.

<table>
<thead>
<tr>
<th>Pharmacy Name</th>
<th>Phone Numbers</th>
<th>Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glen Rock Medical Pharmacy</td>
<td>866-888-3200, 201-444-5792</td>
<td>210 Rock Road, Glen Rock, NJ 07452</td>
</tr>
<tr>
<td>Mandell’s Clinical Pharmacy</td>
<td>877-252-0553, 877-252-0450</td>
<td>7 Cedar Grove Lane, Somerset, NJ 08873</td>
</tr>
<tr>
<td>Walgreens Specialty Pharmacy</td>
<td>800-424-9002, 800-874-9179</td>
<td>7164 Technology Drive, Ste 100, Frisco, TX 75034</td>
</tr>
<tr>
<td><strong>Walgreens 24-hour Fertility Pharmacy</strong></td>
<td>612-377-3308, 612-377-5670</td>
<td>2426 Hennepin Ave S, Minneapolis, MN 55405</td>
</tr>
<tr>
<td>Fairview Specialty Pharmacy- University Village</td>
<td>612-672-1430, 800-681-0459, 612-672-1431</td>
<td>2545 University Ave SE, Minneapolis, MN 55414</td>
</tr>
<tr>
<td>Freedom Fertility Pharmacy</td>
<td>800-660-4283, 888-660-4283</td>
<td>12 Kent Way, Byfield, MA 01922</td>
</tr>
</tbody>
</table>
PREPARATION OF LEUPROLIDE ACETATE (LUPRON)

1. Clean the work surface that will be used to prepare the injection with soap and water, or swab with alcohol, and wash your hands thoroughly.

2. Assemble the necessary materials: Leuprolide Acetate (Lupron), insulin syringe and needle, alcohol wipes, and disposal container. The needles and syringes are intended for one time use only.

3. Check medication label for proper type of medication and expiration date (medication should be clear and free of particles).

4. Using your thumb, remove flip top cap from Leuprolide Acetate bottle. The medication does not need to be recapped after use.

5. Wipe top of vial with an alcohol swab and allow alcohol to dry. Do not touch the rubber stopper after it is wiped.

6. Remove syringe from packaging and draw air into the syringe by pulling plunger back to amount prescribed (see patient outline).

7. Insert needle straight down through the center circle of the rubber stopper of the vial.

8. Inject air into the Leuprolide Acetate vial equal to or greater than the amount of medication to be withdrawn.

9. Without removing the needle, turn the bottle upside down. Slowly pull back the plunger filling the syringe to slightly more than the prescribed dose and then adjust the plunger to your prescribed dose to clear away air bubbles. Make sure the tip of the needle remains in the medication to avoid withdrawing large amounts of air. It may be necessary to back the needle out of the vial to ensure the needle tip remains below the level of medication.

10. Inject excess medicine and air bubbles back into Leuprolide Acetate bottle.

11. Once the plunger is set at your prescribed dose, remove the syringe needle from the vial.
SUBCUTANEOUS ADMINISTRATION OF LEUPROLIDE ACETATE (LUPRON)

1. Make yourself comfortable by sitting or lying down.
2. Choose an injection site (abdomen, thigh, or upper arm).
3. Clean the injection site with an alcohol swab and allow it to air dry.
4. Carefully uncap the needle by pulling the needle cap from the syringe.
5. Holding the syringe in one hand, use the other hand to pinch a fold of skin at the prepared injection site.
6. Holding the syringe like a pencil, quickly insert the entire length of the needle into the skin at a 90° angle.
7. Inject prescribed amount of Leuprolide Acetate into the subcutaneous tissue by slowly and steadily depressing the plunger. Be careful not to move the syringe and needle while you are injecting.
8. After injecting all the medication, release the pinch.
9. Gently withdraw the needle.
10. Dispose of the syringe and needle safely. Please check with your individual disposal company for specific information regarding disposal. Pharmacies will generally supply Sharps containers or you may dispose of the needle and syringe by placing them in an empty plastic liter bottle. For safety reasons, please do not bring to the office for disposal.
11. Place a tissue or gauze over the skin where you gave the injection. If any bleeding occurs, apply gentle pressure for 10-15 seconds.
12. Alternate injection sites.
ALWAYS PAY CLOSE ATTENTION TO THE DOSE OF LUPRON PRESCRIBED FOR YOU BY YOUR PHYSICIAN. CAREFULLY CHECK THE EXPIRATION DATE ON THE BOTTLE AND DO NOT USE OUTDATED MEDICINE. CAREFULLY CALCULATE AND MEASURE OUT THE CORRECT AMOUNT.

LEUPROLIDE ACETATE (LUPRON) IS A MULTI-DOSE VIAL.

LEUPROLIDE ACETATE SHOULD BE STORED BELOW 77 °F (REFRIGERATED OR UNREFRIGERATED). AVOID FREEZING.

IF REFRIGERATING PRODUCT, REMOVE FROM REFRIGERATOR 15-30 MINUTES PRIOR TO SCHEDULED INJECTION TO ADJUST TO ROOM TEMPERATURE.

PROTECT FROM LIGHT - STORE VIAL IN CARTON.
**LEUPROLIDE ACETATE (LUPRON) SYRINGES AND DOSAGES**

In *Insulin Syringe* Kit Syringe Tuberculin Syringe

<table>
<thead>
<tr>
<th>Insulin Syringe</th>
<th>Lupron Kit Syringe</th>
<th>Tuberculin Syringe</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 units</td>
<td>0.2 ml</td>
<td>0.2 cc (or ml)</td>
</tr>
<tr>
<td>10 units</td>
<td>unmarked line (line closest to needle)</td>
<td>0.1 cc (or ml)</td>
</tr>
<tr>
<td>5 units</td>
<td>1/2 of unmarked line</td>
<td>1/2 of 0.1 cc (or ml)</td>
</tr>
<tr>
<td>2.5 units</td>
<td>1/4 of unmarked line</td>
<td>1/4 of 0.1 cc (or ml)</td>
</tr>
</tbody>
</table>

*Your prescription is written for the insulin syringe measuring in units. Medication doses provided by Midwest Center staff are based upon insulin syringe measurements. Please utilize this conversion table if necessary.*
PRENATAL VITAMIN

A prenatal vitamin is an oral vitamin given to supplement your diet by providing you with the vitamins and minerals needed for pregnancy. This vitamin contains the recommended amount of folic acid which will help to decrease the chance of birth defects in early development of the fetus.

Prenatal vitamins are formulated to optimize supplementation for an expecting mother, and it is our feeling that this is also optimal for conception. Given the wide variety of other herbs and vitamins available, and given the lack of studies demonstrating their effect upon reproduction, we ask that you do not take other vitamins or herbal preparations while undergoing in vitro fertilization.

Potential Side Effects of Prenatal Vitamins

- Constipation
- Darkening of the stools due to iron contained in the vitamins
- Nausea

You may want to drink plenty of water as well as include fiber in your diet to help counteract these effects.

Stool softeners (i.e. Metamucil, Citrucel) may be taken to treat constipation.

Begin taking one vitamin daily when hormone replacement therapy medications begin if you have not already started.
OVERVIEW

- Call our 3rd party coordinator at (763) 494-7762 with the onset of your period two to three cycles prior to your treatment cycle.

- If indicated, birth control pills will begin as instructed.

- Norethindrone Acetate (Aygestin) will begin as instructed by staff.

- Leuprolide Acetate (subcutaneous injections) will begin as instructed by staff. Refer to Leuprolide Acetate (Lupron) administration instructions.

- It is normal to experience vaginal bleeding of varying amounts during down regulation.

- To confirm that suppression has been achieved, a vaginal ultrasound and serum estradiol (blood test) will be performed.

- Once down regulation has been achieved, hormone replacement therapy medications will begin as instructed by Midwest Center staff.

- Vaginal intercourse using condoms is permitted until the initiation of hormone replacement therapy medications. Abstinence is required from the start of hormone replacement therapy until fetal heart motion is documented.

- Begin taking one prenatal vitamin daily when hormone replacement therapy medications begin, if not before.

- Ultrasounds and blood tests will be obtained periodically while on hormone replacement therapy medications.

- To obtain sperm with maximum motility for fertilization of the oocytes, we require that the last ejaculation occur on stimulation day 7. This ejaculate does not need to be saved and should not be produced by having vaginal intercourse.

- You will have a pregnancy test (quantitative BhCG) approximately 14 and 16 days after embryo transfer.
Section VI

Hormone Replacement Therapy/Embryo Transfer Preparation
ESTRACE AND ESTRADIOL TRANSDERMAL PATCH

Estrogen is a hormone that is naturally produced by the granulosa cells lining the follicle wall during the first half of the menstrual cycle. The purpose of this hormone is to enhance the growth of the uterine lining to optimize implantation. Patients will be instructed to begin this after down regulation has been achieved. There are two means of estrogen administration, oral medication and intramuscular injection. Patients will be given instruction regarding the mode of administration and time frame of use that your physician has prescribed.

Estrace

_Estrace_ is a form of estrogen that is taken orally. Patients will be instructed on timing and dosage. If the pregnancy test is positive, _Estrace_ will be continued through 12 weeks of pregnancy unless instructed otherwise.

Estradiol Transdermal Patch

_Estradiol Transdermal Patch_ is a form of estrogen that is administered through the skin by applying the patch to the abdomen. Skin should be clean, dry and intact. The patch(es) are changed every other day and continue through 12 weeks of pregnancy unless instructed otherwise.
LUTEAL PHASE SUPPORT

**Progesterone** is a hormone that is naturally produced by the corpus luteum (ruptured follicle) during the second half of the menstrual cycle. The placenta will take over progesterone production at around 8-9 weeks of pregnancy. Natural progesterone is prescribed by most fertility specialists and is especially prescribed for those patients undergoing a variety of the assisted technology procedures. This natural source of progesterone will optimize implantation and **continue through 12 weeks** unless instructed otherwise by your physician.

The package insert that accompanies the medication may include advice against its use in pregnancy. This is because both **synthetic** progestins and **natural** progestins are grouped together by the FDA. Synthetic progestins have been associated with a slight increase in birth defects if taken during early pregnancy. To date, there is no evidence that supports this when using natural progesterone and the benefits of this medication outweigh any potential risks.

- **Refer to your individualized patient medication outline**

**Progesterone Options:**

- **Progesterone in Oil** is a medication that is administered by intramuscular injection. It is normal to have muscle soreness around the injection site. However, if the sites become red or hard, please notify the nurses at (763) 494-7726. Warm, moist packs at the site may help to alleviate discomfort; however, hot tub baths are not recommended.

- **Progesterone Suppositories** contain natural progesterone. This medication is usually suspended in glycerin base; therefore, it will dissolve and the medication is absorbed. We recommend that you wear a pantyliner or pad when using these suppositories as discharge is common.

- **Endometrin** is a vaginal insert that contains 100 mg of natural progesterone in each tablet. Each Endometrin insert comes with its own wrapped, disposable applicator. Once inserted, Endometrin dissolves rapidly with minimal discharge.

Potential side effects of progesterone include lethargy, nausea, breast tenderness, water retention, weight gain, increased sensitivity to sunlight, delayed menses or decrease in flow during menses. Worsening of pre-existing depression, migraine headaches, epilepsy, asthma, heart disease or kidney disease may occur and should be discussed if present in your medical history prior to beginning this medication.

**Midwest Center staff will provide instruction regarding the progesterone option(s) and dosage appropriate for your treatment.** Progesterone is started **3-4 days before transfer** (depending on your protocol) and will continue daily until the second pregnancy test, even if vaginal bleeding or spotting occurs. If your pregnancy test is positive, progesterone will be continued through 12 weeks unless instructed otherwise.
PREPARATION OF PROGESTERONE IN OIL

1. Clean work surface that will be used to prepare the injection with soap and water, or swab with alcohol, and wash your hands thoroughly.

2. Assemble the necessary materials: medication vial, syringe and 22 G 1 ½” needle, alcohol wipes, and disposal container.

3. Attach needle to syringe.

4. Remove flip top from vial. Wipe top of vial with alcohol and allow to dry.

5. Remove cover from the needle.

6. Draw prescribed number of cc’s (or ml’s) of air into the syringe. Insert needle into vial and inject the air. Please refer to your individualized patient medication outline.

7. Draw prescribed number of cc’s (or ml’s) of the progesterone into the syringe. Please refer to your patient medication outline.

8. Replace the needle cap and twist needle off. Attach a new, intramuscular (22 G 1 ½” ) needle to the syringe prior to administering injection.

9. Remove any air bubbles.

10. This medication is injected intramuscularly. Refer to intramuscular injection administration instructions.

11. Progesterone is oil-based and will take longer to draw up into the syringe and to inject.

* If you touch the needle, if you blow on the needle, or if it comes in contact with any surface, it is considered contaminated. In the event this occurs, recap and remove the contaminated needle. Attach a sterile needle to the syringe and continue preparation.

* When drawing this medication, please note that 1 cc = 1 ml.
INTRAMUSCULAR INJECTION ADMINISTRATION

1. Choose the area of your upper buttock or thigh where you will administer the injection.

2. Cleanse the area for injection with an alcohol wipe and allow it to air dry.

3. Remove the needle cap.

4. With your other hand, stabilize the skin between your thumb and forefinger.

5. Holding the syringe like a pencil, quickly insert the entire length of the needle at a 90° angle through the skin and into the muscle.

6. Using your stabilizing hand to hold syringe, pull back (aspirate) the plunger 2-3 units to check that you have not placed the needle into a blood vessel. Aspiration should be maintained for 5-10 seconds. If medication remains clear, inject medication. If blood appears in the syringe, withdraw the needle entirely, properly dispose of the syringe and needle, and repeat the medication preparation process. Under certain circumstances, we recognize that discarding the medication may not be an option and recommend changing the needle before attempting to re-administer the injection. Select and prepare a new site.

7. Inject all of the medication into the muscle steadily and slowly. Medication should be injected at a rate of approximately 1 ml every 5-10 seconds. Be careful not to move the syringe as you are injecting the medication.

8. Wait 5-10 seconds before withdrawing needle to allow time for medication to diffuse into the muscle.

9. Withdraw the needle from the skin and place a tissue or gauze over the site where you gave the injection. Hold in place with gentle pressure for 10-15 seconds.

10. Dispose of the syringe and needle safely. Please check with your individual disposal company for specific information regarding disposal. Pharmacies will generally supply Sharps containers or you may dispose of the needle and syringe by placing them in an empty plastic liter bottle. For safety reasons, please do not bring to the office for disposal.

11. Alternate injection sites.
INTRAMUSCULAR INJECTION SITE LOCATION

- **To locate the appropriate area of the buttck**, envision the division of either buttck into four equal quadrants. Then, further divide the upper, outer quadrant into four equal quadrants—the injection site will be in the uppermost, outermost quadrant of the buttck following the second division.

![Diagram of injection site on the buttck]

Relax the muscle on the side in which the injection is being administered.

⇒ *If another person administers this injection*, the patient should either lie face down on a firm surface or stand, leaning forward against a surface using arms to stabilize the body. When leaning, cross one leg behind the other leg and bend the knee of the crossed leg to allow the muscle to relax. Give the injection into the non-weight bearing side.

⇒ *If the pt. self-administers this injection*, sit with knees bent and feet flat on the floor.

***** BE CAREFUL TO NOT ADMINISTER THE INJECTION TOO CLOSE TO THE SPINE OR TOO LOW ON THE BUTTOCK.*****

- **To locate the appropriate area on the thigh**, the patient should sit with knees bent, feet flat on the floor. The intramuscular injection is administered on top of the thigh. The optimal area to administer this injection is at least four inches above the knee and four inches below the hip. Caution should be used to not inject too close to the knee or hip.

![Diagram of injection site on the thigh]

Relax the muscle on the side in which the injection is being administered.

⇒ *For injection into the thigh*, the patient should sit while administering the injection to relax the muscle.
IMPORTANT POINTS TO REMEMBER

1. Always pay close attention to the dose of medication prescribed for you. Check medication expiration date.

2. For medication storage information, refer to the individualized package insert. Store all medications away from light. Avoid hot or cold temperature extremes.

3. Be sure to alternate injection sites (right side versus left) when administering Lupron and Estradiol Valerate (if indicated).

4. Be consistent with the timing of injections. Give the same time each day.

5. Insert entire needle into the muscle and/or subcutaneous tissue (depending upon the type of administration). The discomfort that is experienced is from the needle penetrating the skin.

6. Swelling and redness sometimes occur where an injection has been given. If the red area is larger than a 50 cent coin or if it lasts for 4 hours or more, contact our office by calling (763) 494-7726.

7. Warm, moist heat before and/or after the medication has been given can greatly reduce the discomfort of injections (i.e. moist washcloth).

8. Dispose of syringes and needles safely. Please check with your individual waste disposal company for specific information regarding disposal. Pharmacies will generally supply Sharps containers or you may dispose of the needles and syringes by placing them in an empty plastic liter pop or bleach bottle. For safety reasons, please do not bring to the office for disposal.
DONOR’S EGG RETRIEVAL/SEMEN COLLECTION

To obtain optimal results, a fresh semen sample needs to be provided on the day of the donor’s egg retrieval. A sterile specimen collection container will be provided by the medical center staff and collection will take place in a private area. We strongly discourage the use of lubricants. However, if it is necessary we will provide you with a non-toxic mineral oil. You may bring your own visual aids as a VCR/DVD is available. **Before giving the sample to the medical center staff, be sure that the label is filled out completely and attached to the container.** This is critical as the information will be used to verify identification prior to and during insemination.
INSEMINATION, FERTILIZATION AND CULTURE OF SPERM & EGGS

When the semen sample is delivered to the laboratory, the sample will be immediately evaluated for how many sperm are present and how healthy they appear. The sperm will be isolated from the semen and held until the time of insemination of the oocytes. Depending upon how many sperm are present, how healthy they appear, and past history of the male, the number of sperm to be incubated with the oocytes and type of insemination will be determined.

After egg retrieval, the oocytes will be evaluated as to their maturity. Based upon this evaluation, a time for insemination with the sperm will be determined. Once in culture together, the sperm and oocytes will not be disturbed for approximately 16-20 hours.

Fertilization Evaluation
After 16-20 hours, the oocytes will be evaluated for evidence of fertilization. Some oocytes may not fertilize. When fertilized, the oocyte breaks the sperm down and reconfigures the male chromosomes into a structure called the male pronucleus. At the same time, the oocyte reconfigures its own chromosomes into the female pronucleus. These two pronuclei are very prominent and easily recognizable under the microscope. Also at this time, if more than one sperm gained entry into any oocyte (polyspermy), that embryo will be discarded as it resulted from abnormal fertilization. Embryos of this type can be identified by the fact that they contain more than 2 pronuclei. Normally fertilized oocytes will be returned to culture for an additional 1 to 4 days.

Embryo Culture
During the following days, the embryos are cultured in a Petri dish containing medium that will support cell division and growth. Two days after the retrieval, the embryos should be at the 2-4 cell stage. Three days after the retrieval, the embryos should be at the 6-8 cell stage. Following fertilization, it is not unusual for some normally fertilized oocytes to cease cell division and degenerate and/or are of too poor quality to support embryo cryopreservation. Embryos of this type will be discarded.
DOXYCYCLINE

Introducing embryos into the uterus could potentially result in an infection; however, it is rare. Doxycycline, an oral antibiotic, is used as a preventative measure. You will begin this medication prior to embryo transfer and continue it for a total of 5 days (one tablet in the a.m. and p.m.).

If the husband/partner is providing a semen sample the day of egg retrieval, he will be asked to take Doxycycline for approximately a 2 week interval prior to retrieval (this is in correlation with the time frame the wife/partner is on hormone replacement therapy medications). The husband/partner will begin Doxycycline, 100 mg, twice a day through the evening before retrieval. This is done as a preventative measure to minimize the possibility of infection in the semen specimen for the in vitro fertilization procedure.

Potential Side Effects:

- Nausea--take with meals or light snack
- Sun sensitivity--limit exposure to the sun and tanning devices. If exposure is unavoidable, sunscreen of 30 SPF is recommended.

- Refer to your individualized patient medication outline.
Section VII

Embryo Transfer
EMBRYO EVALUATION / UTERINE EMBRYO TRANSFER

On the morning of the embryo transfer, all embryos that were placed in culture will be evaluated. This is in an attempt to identify embryos that are most likely to continue development once transferred back to the uterus. You will be provided with information regarding the number of your embryos the day of the transfer. After you review the information, the number of embryos to be transferred will be discussed with you prior to the procedure. The embryos that appear most likely to result in a pregnancy will be transferred. As a general guide, 1-2 embryos will be transferred.

- The following will be used to determine the number of embryos to be transferred:
  - Patient age
  - Total number of embryos
  - How the couple feels about the possibility of a multiple pregnancy and multi-fetal reduction

- The embryo transfer is performed two to five days following egg retrieval. The nurses will inform you regarding the transfer date once the embryologist reviews fertilization.

- There are no dietary restrictions on the day of transfer. Regular eating/dietary habits recommended.

- It is requested that patients and partners do not wear cologne, perfume, or scented hygiene products the day of embryo transfer.

- Patients will take Ibuprofen, 600 mg, one 1/2 hour before the embryo transfer. Please bring your own medication.

- You will need to check in at MCRH at the time designated by MCRH staff, and you will then be taken to the transfer suite. After lying down on the table, the physician will perform an ultrasound to measure the uterus. After measurements are taken, the physician will place a speculum in the vagina to visualize and cleanse the cervix. The embryologist will place the embryos into the catheter. The physician will pass the catheter through the cervix into the uterine cavity. The embryos are then placed in the appropriate portion of the uterus to optimize implantation.

- You may bring your own CD’s to listen to during your transfer, or one can be chosen from MCRH’s supply.

- After the transfer, you will recover in the transfer room for 15-30 minutes. You may rest or you may want to bring reading material.

- Following transfer, you can engage in light activity and resume normal activity the following day.

- If you experience pain or cramping, take regular strength Tylenol, 2 tablets, every 6 hours.

- Potential risks associated with embryo transfer include uterine cramping, bleeding, infection, sterility, multiple pregnancies, and ectopic pregnancy which may require major surgery for treatment.
EMBRYO STATUS REPORT

Below is an example of the information you will be given at the time of embryo transfer. This information will provide you with the number of your embryo(s). Please review this information in advance of your procedure in order to prepare yourselves for meeting with the embryologist. When meeting with the embryologist, you will sign off on how many embryos you wish to transfer and what you wish to do with any remaining or “extra” viable embryos. Most often couples elect to culture any remaining embryos for possible cryopreservation. If for some reason you are electing not to cryopreserve your embryos, please communicate this to your IVF coordinators. A consultation with Dr. Corfman is required for this election prior to oocyte retrieval.

Embryo Status Report

The following information is being provided to you in preparation for your upcoming transfer.

- **Number of embryos to transfer:**
  
  1-2 is optimal

- **Multifetal Reduction:**
  
  Do not transfer more than you are willing to take home. There is a rare chance of getting more than you transfer (identical twins)

There are medical/surgical conditions that may indicate fewer embryos should be transferred. These conditions are typically reviewed with the physician during your initial consultation.

**Date __________**

- ____ # of oocytes retrieved
- ICSI? Yes No
- ____ # of oocytes ICSI’d
- ____ # of oocytes fertilized
- ____ # of viable embryos
Section VIII

Post Embryo Transfer
LOW-DOSE ASPIRIN

Patients may be instructed to take low-dose aspirin (81mg) orally beginning the day of transfer if they fall into any one or more of the following categories:

- Equal to or greater than 38 years old
- History of previous pregnancy loss
- History of severe endometriosis
- History of chlamydia
- Immunological indications

The role of the immune system in implantation and prolongation of pregnancy is not well understood. It is thought, however, that if an immunologic imbalance is present, the woman who has received embryos may develop antibodies that “attack” the placenta, inducing blood clots to form, thereby reducing transfer of nutrients from the mother to the fetus. This might jeopardize the pregnancy. Low dose aspirin, taken orally, has been used to treat such at risk individuals by lowering the likelihood of blood clot formation at the placenta.

Patients will continue low-dose aspirin through 12 weeks of pregnancy unless otherwise instructed by their primary physician.

Low-dose aspirin can be taken any time of the day you choose, but keep that chosen time consistent.
LOVENOX

Patients may be instructed to administer heparin subcutaneously, if indicated by your physician, to treat immunological disorders or a history of recurrent pregnancy loss.

The role of the immune system in implantation and prolongation of pregnancy is not well understood. It is thought, however, that if an immunologic imbalance is present, the woman who has received embryos may develop antibodies that “attack” the placenta, inducing blood clots to form, thereby reducing transfer of nutrients from the mother to the fetus. This might jeopardize the pregnancy. Lovenox, administered subcutaneously, has been used to treat such at risk individuals by lowering the likelihood of blood clot formation at the placenta.

Lovenox injections will begin when notified and should be administered subcutaneously every 12 hours as instructed.

Risks of Lovenox include bleeding, but the risk is small with proper monitoring.

This medication should not be taken in conjunction with other aspirin products unless otherwise instructed.
PREPARATION OF LOVENOX

Lovenox will either be packaged in a prefilled syringe or a multi-dose vial. If using a prefilled syringe, uncap the needle and follow the injection instructions on the following page. If using a multi-dose vial, please follow these instructions.

1. Clean the work surface that will be used to prepare the injection with soap and water, or swab with alcohol, and wash your hands thoroughly.

2. Assemble the necessary materials: Lovenox, syringe and needle, alcohol wipes, and disposal container. The needles and syringes are intended for one time use only.

3. Check medication label for proper type of medication and expiration date (medication should be clear and free of particles).

4. Using your thumb, remove flip top cap from Heparin bottle. The medication does not need to be recapped after use.

5. Wipe top of vial with an alcohol swab and allow alcohol to dry. Do not touch the rubber stopper after it is wiped.

6. Remove syringe from packaging and draw air into the syringe by pulling plunger back to amount prescribed.

7. Insert needle straight down through the center circle of the rubber stopper of the vial.

8. Inject air into the Lovenox vial equal to or greater than the amount of medication to be withdrawn.

9. Without removing the needle, turn the bottle upside down. Slowly pull back the plunger filling the syringe to slightly more than the prescribed dose and then adjust the plunger to your prescribed dose to clear away air bubbles. Make sure the tip of the needle remains in the medication to avoid withdrawing large amounts of air. It may be necessary to back the needle out of the vial to ensure the needle tip remains below the level of medication.

10. Inject excess medicine and air bubbles back into Lovenox bottle.

11. Once the plunger is set at your prescribed dose, remove the syringe needle from the vial.
SUBCUTANEOUS ADMINISTRATION OF LOVENOX

1. Make yourself comfortable by sitting or lying down.

2. Choose an injection site (abdomen, thigh, or upper arm).

3. Clean the injection site with an alcohol swab and allow it to air dry.

4. Carefully uncap the needle by pulling the needle cap from the syringe.

5. Holding the syringe in one hand, use the other hand to pinch a fold of skin at the prepared injection site.

6. Holding the syringe like a pencil, quickly insert the entire length of the needle into the skin at a 90° angle.

7. Inject prescribed amount of Lovenox into the subcutaneous tissue by slowly and steadily depressing the plunger. Be careful not to move the syringe and needle while you are injecting.

8. After injecting all the medication, leave needle in place for 10 seconds after the injection and then release the pinch.

9. Gently withdraw the needle.

10. Dispose of the syringe and needle safely. Please check with your individual disposal company for specific information regarding disposal. Pharmacies will generally supply Sharps containers or you may dispose of the needle and syringe by placing them in an empty plastic liter bottle. For safety reasons, please do not bring to the office for disposal.

11. Place a tissue or gauze over the skin where you gave the injection. If any bleeding occurs, apply gentle pressure for 10-15 seconds.

12. Do not massage the injection site.

13. Alternate injection sites to help minimize bruising.
PREGNANCY TESTS AND FOLLOW-UP

- Some bleeding may occur with or without pregnancy. If you experience bleeding prior to your pregnancy test, be sure to continue your prescribed progesterone until pregnancy test results are known and you have received instructions from MCRH staff.

- BhCG (quantitative) pregnancy tests will be drawn approximately 14 and 16 days from embryo transfer. The BhCG tests are to be drawn on the specific dates given to you. They need to be drawn prior to 8:45 a.m. for patients having the test at The Midwest Center. These results will be reported the same day. **Please call (763) 494-7700 to schedule.**

  If you have your BhCG drawn elsewhere, please be aware that results may not be reported until the following business day. A message will be left on your voicemail by Midwest Center staff upon receipt of the result.

- If done at an outside facility, please obtain a **quantitative** (BhCG) pregnancy test. These arrangements can be made through your local physician and/or nurse. All interpretation of these results and recommendations must be made by your physician/staff at MCRH.

- It is a requirement that all patients have the first quantitative BhCG drawn to confirm the pregnancy outcome even if bleeding begins prior to your scheduled pregnancy test. Results of the first pregnancy test may or may not indicate outcome.

- If a **positive** pregnancy test is obtained, prenatal instructions will be provided. An **ultrasound should be scheduled** for approximately 2 to 3 weeks after the positive blood test. Arrangements should be made for this ultrasound to be done at The Midwest Center or by your primary care physician. **It is required that you abstain from intercourse until fetal heart motion is identified.**

- If the first BhCG is **negative**, you have the option to decline the second test. Your progesterone will be discontinued and a menses should begin within one week. If no menses occurs, contact our office at (763) 494-7726.

- If the pregnancy test result is negative, you will be instructed to schedule a follow up consultation via telephone or office visit to summarize your treatment cycle, discuss future treatment options and recommendations.

- **Refer to individualized patient medication outline.**
SELECTIVE (MULTI-FETAL) REDUCTION

Transferring several embryos back into the uterus can increase the potential for a pregnancy but can also increase the chance of multiple gestation. It is estimated that 40% of the pregnancies achieved may result in pregnancies with two or more fetuses. Several considerations to reduce multiple gestations, however not eliminate them, include limiting the number of embryos transferred (and cryopreserving the remaining embryos for later transfer) and selective reduction during early pregnancy. These measures would also reduce the risk of preterm infants and complications associated with them.

Selective reduction requires attention when a pregnancy occurs and more than 2 gestational sacs are seen on ultrasound. These pregnancies are considered “high-risk” and have potential for complications. OB/GYN physicians often refer patients in this situation to a perinatologist, an OB/GYN physician who specializes in high risk pregnancies. The perinatologist would provide counsel regarding selective reduction and perform the procedure, if desired.

You will be provided with information regarding the number of your embryos the day of the transfer. After you review the information, the number of embryos to be transferred will be discussed with you prior to the procedure. This decision is based largely on your feelings about selective reduction.
Section IX

ART Options
ASSISTED ZONA HATCHING (AZH)

Your physician may recommend that you have a procedure called **assisted zona hatching** performed on your embryo(s). Candidates include donors who are 35 years of age and greater, patients with previous failed implantation and those designated by The Midwest Center physician. With this procedure, a small hole is created in the shell (zona pellucida) that surrounds the embryo. The reason is that while all embryos must escape from the zona pellucida prior to implantation, embryos from females 35 years of age or greater appear to do so less successfully than embryos from younger women. By creating this hole artificially, it appears that the embryos are better able to escape the zona; therefore, it increases the chance of implantation and pregnancy. Embryo transfer for patients undergoing AZH occurs two to three days after egg retrieval unless otherwise instructed.

There is a small possibility of embryo damage occurring with this procedure. If the embryo quality is poor, then this risk is increased. Long-term follow-up of infants born as a result of this technique is not available. Further study will be required before a final determination can be made.

Donor egg recipients having assisted zona hatching performed on their embryos will be prescribed a medication (steroid) called **Methylprednisolone**. It is believed that this medication can help prevent rejection of the embryos once they are transferred into the uterus.
INTRACYTOPLASMIC SPERM INJECTION (ICSI)

ICSI is a technique which involves injecting a single sperm into the egg using micromanipulation techniques. It may be used in cases where there is severe male factor (low sperm quantity or quality), and for patients that have previously undergone IVF with no fertilization using routine fertilization methods. The use of ICSI can markedly increase the chance of achieving fertilization in male factor infertility. The physician and embryologist will decide which patients are good candidates for ICSI based on medical history and semen parameters.

Some drawbacks may exist with this technique. For example, damage may result to some of the oocytes during ICSI which can cause the egg to lose viability. Secondly, while sperm entry into the egg is ensured with ICSI, fertilization is a complex process. Simply injecting a sperm into the oocyte does not ensure that fertilization will be completed and an embryo will be produced. Lastly, because men with severe male factor infertility are known to produce higher percentage of sperm that have an abnormal number of chromosomes, sex chromosome abnormalities (SCA) rate of offspring born through the use of ICSI is about 3 times higher than the general population. However, the rate of sex chromosome abnormalities in ICSI is still very low at less than 1%.

In approximately 5% of patients with normal pre-IVF semen analysis, the semen sample on the day of egg retrieval is not adequate for insemination. In order to avoid a failed fertilization, ICSI will be performed.
What is intracytoplasmic sperm injection (ICSI)?

Before a man’s sperm can fertilize a woman’s egg, the head of the sperm must attach to the outside of the egg. Once attached, the sperm pushes through the outer layer to the inside of the egg (cytoplasm), where fertilization takes place.

Sometimes the sperm cannot penetrate the outer layer, for a variety of reasons. The egg's outer layer may be thick or hard to penetrate or the sperm may be unable to swim. In these cases, a procedure called intracytoplasmic sperm injection (ICSI) can be done along with in vitro fertilization (IVF) to help fertilize the egg. During ICSI, a single sperm is injected directly into the cytoplasm the egg.

**How does ICSI work?**

There are two ways that an egg may be fertilized by IVF: traditional and ICSI. In traditional IVF, 50,000 or more swimming sperm are placed next to the egg in a laboratory dish. Fertilization occurs when one of the sperm enters into the cytoplasm of the egg. In the ICSI process, a tiny needle, called a micropipette, is used to inject a single sperm into the center of the egg. With either traditional IVF or ICSI, once fertilization occurs, the fertilized egg (now called an embryo) grows in a laboratory for 1 to 5 days before it is transferred to the woman's uterus (womb).

**Why would I need ICSI?**

ICSI helps to overcome fertility problems, such as:

- The male partner produces too few sperm to do artificial insemination (intrauterine insemination [IUI]) or IVF.
- The sperm may not move in a normal fashion.
- The sperm may have trouble attaching to the egg.
- A blockage in the male reproductive tract may keep sperm from getting out.
- Eggs have not fertilized by traditional IVF, regardless of the condition of the sperm.
- In vitro matured eggs are being used.
- Previously frozen eggs are being used.

**Will ICSI work?**

ICSI fertilizes 50% to 80% of eggs. But the following problems may occur during or after the ICSI process:

- Some or all of the eggs may be damaged.
- The egg might not grow into an embryo even after it is injected with sperm.
- The embryo may stop growing.

Once fertilization takes place, a couple’s chance of giving birth to a single baby, twins, or triplets is the same if they have IVF with or without ICSI.

**Can ICSI affect a baby’s development?**

If a woman gets pregnant naturally, there is a 1.5% to 3% chance that the baby will have a major birth defect. The chance of birth defects associated with ICSI is similar to IVF, but slightly higher than in natural conception.

The slightly higher risk of birth defects may actually be due to the infertility and not the treatments used to overcome the infertility.

Certain conditions have been associated with the use of ICSI, such as Beckwith-Wiedemann syndrome, Angelman syndrome, hypospadias, or sex chromosome abnormalities. They are thought to occur in far less than 1% of children conceived using this technique.

Some of the problems that cause infertility may be genetic. For example, male children conceived with the use of ICSI may have the same infertility issues as their fathers.

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For more information on this and other reproductive health topics, visit www.ReproductiveFacts.org
RESCUE INTRACYTOPLASMIC SPERM INJECTION (RICS)

RICS is a technique which involves injecting a single sperm into the egg using micromanipulation techniques. RICS is only used in the event none of the eggs fertilize with regular insemination on the day of egg retrieval. The use of this treatment option is unknown until the day after egg retrieval, and the chance for establishing a pregnancy is low (less than 10%). Similar to ICSI, there may be risks associated with RISCI, including sex chromosome abnormalities.
SEX CHROMOSOME ABNORMALITY (SCA)

During normal sperm production, each sperm receives either an X or Y chromosome (the sex chromosomes). In men with abnormal sperm production, the percentage of sperm with just an X or Y is reduced due to errors in spermatogenesis. While the number of normal sperm is still typically greater than 90%, the higher rate of abnormal sperm increases the chance that an offspring will have a sex chromosome abnormality.

The incidence of sex chromosome abnormalities in the general population is approximately 0.2%. The most comprehensive study of ICSI offspring found a 0.6% incidence of sex chromosome abnormality, or 3 fold higher than non–ICSI babies. While the risk is higher for ICSI babies, it is still relatively low.

There are several variants of SCA, with the female Turner’s syndrome (XO) and the male Klinefelter’s syndrome (XXY) being the most characterized. In both syndromes, affected individuals may have learning disabilities, though intelligence is not affected in all cases.

Turner’s syndrome is usually caused by a missing X chromosome. There are many manifestations of this syndrome but the main features are short stature, webbing of the skin of the neck, absent or retarded development of secondary sexual characteristics, absence of menstruation, narrowing of the aorta, and abnormalities of the eyes and bones. The condition is either diagnosed at birth because of the associated anomalies, or at puberty when there is absent or delayed menses and delayed development of normal secondary sexual characteristics.

Klinefelter’s syndrome is caused by an extra X chromosome and affects only males. An infant appears normal at birth, but the defect usually becomes apparent at puberty when secondary sexual characteristics fail or are late to develop, and testicular changes occur that eventually result in infertility in the majority of those affected. Some mild cases may go undetected with no abnormalities present except infertility.
EMBRYO CRYOPRESERVATION

Embryo cryopreservation is a process whereby embryos are frozen and then maintained in a frozen state. The procedure eliminates the need to surgically remove fresh eggs from the female’s ovaries each time a pregnancy is attempted. We strongly recommend freezing extra embryos because of their inherent potential and the significant effort you will extend to create them. This is an additional fee. The “extra” embryos will be stored in a frozen state until it is determined that appropriate conditions exist in the woman’s uterus to achieve pregnancy. Approximately 50% of our patients have freezable embryos. A frozen embryo transfer (FET) cycle costs less than a donor recipient cycle. If you elect to not cryopreserve embryos, you will need a mandatory consultation with Dr. Corfman to discuss risks/benefits. Please let us know in advance so we can schedule that appointment prior to egg retrieval.

Risks associated with embryo cryopreservation include possible failure of the equipment or mechanical support system, possible damage to the embryos during the freezing and thawing processes, and risks to the woman’s uterus during the transfer. The degree of these risks is unknown at the present time. Extensive investigations of cryopreserved animal embryos have not demonstrated a significant increased risk of obstetric complications or fetal abnormalities. The rate of congenital abnormalities or malformations in the offspring of IVF cryopreserved pregnancies is the same as that of the general population. Long-term follow-up of infants born as a result of this technique is not available.

MCRH is not a long-term storage facility. If you wish to have embryos frozen, you must complete the appropriate consent forms by the testing deadline of your IVF cycle to have your embryos frozen and transferred to ReproTech Limited (RTL) for storage. RTL is a local, long-term storage facility that specializes in providing safe, efficient and effective maintenance of frozen specimens. Your completed RTL consent forms need to be returned directly to RTL at the following address:

ReproTech, Ltd.
33 Fifth Avenue NW, Suite 900
St. Paul, MN 55112
Fax: (651) 489-0442

At the conclusion of your fresh cycle, if it is determined that you have frozen embryos, they will set up an account in your name. Your embryos will be automatically transferred to RTL following your cycle, and they will notify you by mail upon receipt of your embryos.
DONOR SPERM

Your physician may recommend the use of donor sperm, especially if there are findings significantly outside of normal semen parameters. Other conditions that may require the use of donor sperm are patients who have had a vasectomy, previous radiation or chemotherapy treatment, and hereditary or genetic disorders. Also, single women who desire pregnancy may request donor insemination.

Consent forms specific to using donor sperm will require signatures from both patient and spouse/partner (when applicable).
FROZEN EMBRYO TRANSFER (FET)

Frozen embryo transfer is the transfer of cryopreserved embryos that were obtained during a previous IVF cycle. The procedure is performed in the same manner as the embryo transfer utilized during IVF cycles and is performed only during our “uptimes”.

Specific instructions are given with regard to medication and a consultation will take place with the physician/embryologist to discuss the number of frozen embryos that should be thawed and examined. If it appears that one or more are medically appropriate for transfer, the transfer will occur.

Similar to a donor recipient cycle, down regulation medications are necessary as is hormone replacement of the uterine lining with estrogen. An estrogen preparation, Estrace (oral) or Estradiol Valerate (injectable), is taken and when the lining appears to be optimal for embryo implantation, the transfer will be scheduled.

Risks associated with a frozen embryo transfer include embryos of poor quality which have a significantly decreased chance of implantation and contamination of embryos which might increase the chance of infection.

If you wish to proceed with a frozen embryo transfer, you will need to contact the IVF Coordinator (763-494-7702) two to three months prior to your desired series to initiate treatment.
Section X

Risks and Complications
RISKS AND COMPLICATIONS

MEDICATION SIDE EFFECTS

- Soreness at the injection site, dizziness, nausea, breast tenderness, mood swings, headaches, nausea, dizziness and weight fluctuation are all side effects of the medications that can occur. These side effects are uncommon, but they can occur together or separately.

- Should you experience severe side effects, please notify the nursing staff at (763) 494-7726.

CANCELLATION

- Cancellation of a cycle is uncommon, but does occur in approximately 15-20% of cycles due to one of the following circumstances:

  The donor’s ovarian response from the drug may be vigorous resulting in a high level of estrogen and excessive follicle development. If this should occur, hCG will not be given.

  The donor’s ovarian response may be less than optimal resulting in a low level of estrogen and/or poor follicle development.

INFECTION

- Introducing embryos into the uterus could potentially result in an infection; however, it is rare. As a preventative measure, you will take an antibiotic called Doxycycline. Patients begin this medication as instructed before the transfer and continue it for a total of 5 days.

PREGNANCY/DELIVERY

- Approximately 1% of people who achieve a pregnancy will unfortunately experience an ectopic (tubal) pregnancy. An ectopic pregnancy is not viable and may require medical or surgical intervention.

- As with pregnancies that are achieved naturally, the risk of miscarriage also exists. Factors affecting this include patient age and previous reproductive history.

- Transferring several embryos back into the uterus can increase the potential for a pregnancy but can also increase the chance of multiple gestation. It is estimated that 40% of the pregnancies achieved may result in pregnancies with two or more fetuses. The potential that a developing embryo may split into identical twins is less than 0.5%. Multiple pregnancies are complicated by an increased risk of premature labor and delivery, maternal hemorrhage, Cesarean delivery, pregnancy-induced high blood pressure and gestational diabetes. Several considerations to reduce multiple gestations, however not eliminate them, include limiting the number of embryos transferred (and cryopreserving the remaining embryos for later transfer) and multi-fetal reduction during early pregnancy. These measures would also reduce the risk of preterm infants and complications associated with them.

- As with naturally conceived and born children, there is a possibility of complications of childbirth, stillbirth or miscarriage, or birth of an abnormal child/children.
BIRTH DEFECTS

- Two Studies published in November 2005 (Fertility and Sterility) have indicated that in vitro fertilization is associated with a slightly higher rate of major birth defects in comparison with naturally conceived children.

- Based on the evidence, infertility is one risk factor for this increased birth defect incidence. More research is needed to ascertain whether factors associated with ART treatment are directly related to the increased risk.
What do I need to worry about with a multiple pregnancy?

Women who take fertility medicines to get pregnant have a higher chance of having more than one fetus in a pregnancy. Fetus is the term for developing humans from 11 weeks of pregnancy until birth. A multiple pregnancy or multiple gestation may have 2 fetuses (twin pregnancy), 3 fetuses (triplet pregnancy), or other (high-order multiple pregnancy). Each additional fetus raises the chances of having a risky pregnancy and can be dangerous for both the mom and babies. Early (preterm) birth is one of the most common problems.

What are some problems with having a multiple pregnancy?

Pregnancy loss
The more fetuses there are in the womb, the more likely it is that the pregnancy will end in miscarriage, premature delivery, or stillbirth. Sometimes one or more of the fetuses will no longer be seen with ultrasound, called vanishing twin syndrome. In fact, 1 out of 3 pregnancies with more than one fetus will naturally reduce its number very early in pregnancy.

Problems for the babies
Many problems are linked to the babies being born early (prematurity). Premature babies can have problems with their lungs, stomach, and bowels, and even die. Some require long stays in the neonatal intensive care unit. Prematurity can also cause problems with bleeding in the brain, which can lead to problems with the baby’s nervous system and development. Prematurity can cause problems with movement and mental retardation, including cerebral palsy. Some problems may not be noticed until the children are older.

Problems for the mother
The risk of pregnancy complications goes up with each fetus in the womb. Some women can develop high blood pressure in pregnancy, called preeclampsia or toxemia of pregnancy. This can be dangerous and it can cause preterm birth, seizures, and, in extreme cases, death of the mother. Gestational diabetes (problems with high blood sugar) is more likely with a multiple pregnancy. In the early stages of a multiple pregnancy can also have more nausea, vomiting, and constipation than a woman carrying one baby. Problems with bleeding before and after the delivery are also more common.

What can I do if I have a multiple pregnancy?
If you are carrying more than one fetus, talk with your doctor and partner about your options. Multiple pregnancy often means specialized obstetric care, especially for triplet and other high-order multiples. Many complications cannot be prevented, but getting good care is important to reduce your risks. Some women may choose to have a procedure called multifetal pregnancy reduction. This can be used to reduce the number of fetuses to a smaller number to increase the chances of having just one or two healthy child(ren). Women with serious health problems may consider this necessary to make the pregnancy less risky.

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For more information on this and other reproductive health topics, visit www.ReproductiveFacts.org
Multiple problems

The dangers and costs of multiple births

By Randle S. Corfman, Ph.D., M.D.

First there were the seven McCaughey babies, born to a couple in rural Iowa. More recently, there were the Chukwu births in Houston — the first known set of surviving octuplets, weighing less than two pounds each. Between those two incidents, there have been countless multiple births across the nation, in numbers of three, four, five and six. Although many in the news media glorify and sensationalize multiple births, the facts tell a very different story.

The fact is that a reputable fertility clinic tries at all costs to reduce the risk of multiple births. Multiple births (meaning triplets and more) cause a wide variety of stresses, including financial and economic strains on families and on the health care system in general. Divorce rates for couples with multiples are much higher than for their counterparts who had single or double births. Let's face it — in our busy world it is difficult enough to raise one child at a time, much less three or more. Unlike the McCaugheys, most couples who have four, five, or six children will not have the luxury of a town that enlists around-the-clock baby sitters, national companies that build them a new house and a state school that ensures seven college educations. Where will the town be when there are seven McCaughey 12-year-olds that need special attention? Babies are fun to hold and watch — puberty-stricken adolescents are a different thing altogether.

Another issue with bringing multiples into the world is cost — not only to the family, but to society in general. Our health care and insurance systems cannot support the astronomical costs those frail, little lives bring with them. For example, seven of the eight babies born in Houston were on ventilators after birth to help them breathe. When babies such as those are able to breathe on their own, they still are at great risk for brain, heart, lung, metabolic, vision and infection complications. It has been estimated that the hospital will spend at least $2 million to care for the Houston octuplets, which by no means ensures their survival or addresses the health problems they may encounter later because of their extremely premature births.

In an article published in the New England Journal of Medicine in July 1994, researchers compared costs incurred from singleton, twin and triplet pregnancies. Costs incurred from singleton births amounted to $9,845; twin births amounted to $37,947 ($18,974 per baby); triplet births were $109,765 ($36,588 per baby). Those results are staggering, especially considering the frequent high-order, multiple gestations around the country. The author suggests that “more attention be paid to approaches to infertility that reduce the likelihood of multiple gestation.” I concur wholeheartedly.

Medical risks

Besides the obvious risks to the health of the children, the mother is also at great medical risk when she carries and delivers more than three children from one pregnancy. With a multiple birth comes a risk of cardiac problems, hemorrhage or the loss of the uterus. In fact, the mother of the Houston octuplets required surgery after labor to stop internal bleeding from her abdominal wall. Raising multiple children without the help, support and love of a mother is an almost impossible responsibility, but one that every multiple-birth scenario places in the realm of reality.

Another multiples issue that fertility clinics and parents must consider is multifetal pregnancy reduction (MFPR), the abortion of one or more of the fetuses in order to create a better chance of survival for the remaining fetuses. MFPR still has its opponents in both the moral and scientific worlds. In the April 1999 issue of Contemporary Ob/Gyn, Sabrina D. Craig, M.D., discusses the use of MFPR with triplets in order to increase the survival rate for the remaining (reduced twin) fetuses. She concludes
that though MFPR may be beneficial in increasing survival rates for high-order multiple gestations, the benefits with triplets are not so cut and dried. In fact, no clear improvement in overall survival or long-term outcome for the surviving twins was shown. The only apparent benefits were higher birth weights and lower admission rates to the NICU — at the cost of the deliberate demise of one of the three fetuses, as well as emotional pain and distress for the parents.

MFPR is a practice that both the McCaugheys and the Chukwus morally opposed — and one that many Catholic medical institutions will not perform. The fact that MFPR puts the pregnancy in an 8 percent risk of complete failure worries many couples, especially those that went through ART (assisted reproductive technology) in getting pregnant. Many couples encounter emotional distress and depression if they are forced into a decision regarding MFPR. Reputable fertility clinics prevent patients from having to make the MFPR decision at all.

At my clinic, we look upon multiple births as a worst-case scenario and do everything possible to prevent them from occurring. In our minds, a singleton or twin birth is ideal, because it places the least amount of stress on the babies, on the expecting couple and on our system as a whole. We believe that fertility doctors must look at the issue from both a micro and macro perspective. Every clinic should have a strategy for the prevention of multiple births.

Our strategy to prevent multiple births is relatively simple. The crucial dilemma in fertility-drug treatment comes after the stage at which hormones are administered to cause the follicles to mature. That is when doctors must decide whether too many follicles have matured to permit the use of a second drug that triggers the release of eggs — or, in the case of in-vitro procedures, how many embryos to replace in the womb. We stop fertility-drug treatment if more than five follicles have ripened at one time, and we do not implant more than three embryos in the womb. Normally, we implant two eggs for women younger than 30 and three eggs for women older than 30. Since our strategy was implemented in 1996, our pregnancy rates have not been compromised.

Insurance coverage
Sadly, along with the health threats to multiple children and mothers, as well as the astronomical costs of caring for the frail babies at birth and afterwards, another issue exists in the world of fertility. It is one that, for many people, threatens the very existence of fertility treatment itself. It is the availability of insurance coverage for the often-expensive fertility treatments — and the continued coverage of pregnancy costs under insurance programs. If fertility clinics do not start getting a handle on multiple-to-single birth ratios, insurance companies will continue to forgo coverage of fertility treatments. Insurers might even begin to write in clauses covering themselves in the case of multiple births — or covering themselves in general against pregnancies conceived through fertility programs. Such measures work toward one unfortunate reality: Some people will be able to afford to have children and some will not.

A myriad of considerations are swirling in the debate over multiple births: insurance issues, divorce rates and familial strains, and financial, economic and moral issues. But during the heated debate, let’s not forget the most important issue of all: the well-being of the child, mother and family. It is very rare that after a septuplet birth, one will see a happy, healthy family like the McCaugheys. It is more likely that the family, like the Chukwus, still may be watching their babies from behind hospital glass after a year, without all of them to hold.

Randle S. Corfman, Ph.D., M.D., is a reproductive endocrinologist at the Midwest Center for Reproductive Health in Minneapolis.
Section XI

Questions and Answers
ASSISTED REPRODUCTIVE TECHNOLOGY

QUESTIONS AND ANSWERS

Q: Is there a possibility of multiple births from ART?
A: Yes, any time more than one embryo is transferred, the chance for multiple pregnancy exists. In fact, many twin births have resulted from ART at The Midwest Center, with fewer triplets and quadruplets. Although we do not directly offer it, multi-fetal reduction is available through referral for couples who achieve a multiple pregnancy.

Q: Is there an increased chance of birth defects if I become pregnant through ART?
A: A review article in the January 1991 edition of Fertility and Sterility reported no increased risk of congenital anomalies in children conceived through routine ART compared to those conceived in the general population. However, when Intracytoplasmic Sperm Injection (ICSI) is used in conjunction with the ARTs, the situation is less clear. Details of these possibilities are listed in the “ART Options” section. As of January 2001, the consensus remains that IVF does not present an increased risk of birth defects.

Q: Does insurance cover the procedure?
A: Insurance companies in the state of Minnesota vary considerably regarding their infertility benefits. Although most insurance carriers do not cover IVF/ART, we urge verification prior to beginning treatment.

Q: How much activity is recommended after Embryo Transfer (ET)?
A: We recommend light activity for 24 hours after ET. Thereafter, most patients resume their normal routines. Strenuous exercises should be avoided until a pregnancy test has been performed.

Q: After Embryo Transfer (ET) takes place, how long must we wait until we have intercourse?
A: Nobody really knows how long one should wait. Theoretically, uterine contractions resulting from intercourse could impair implantation. We recommend that you abstain from intercourse until after the pregnancy test. If the pregnancy test is positive, please abstain until the fetus’ heartbeat is seen on ultrasound (2-3 weeks after pregnancy test).

Q: What options do we have if the ART cycle results in a higher number of multiples (i.e. triplets or quadruplets)?
A: In cases of high order multiple pregnancies, you will be counseled regarding your options by the staff at Midwest Center and your referring physician. One option includes multi-fetal reduction, a procedure by which the number of fetuses is reduced, under ultrasound guidance. The procedure is performed by a perinatologist (high-risk obstetrician) upon referral. Risks with that procedure include a small chance of total loss of the pregnancy (4-7% chance of total loss per embryo reduced). Since spontaneous reductions (i.e. from 3 to 2) can occur in early pregnancy, the procedure is performed after that may have occurred, typically at 10 weeks.
Q: Are drop-in childcare services available when I undergo my procedure(s)?
A: The Midwest Center does not offer on-site childcare services. Kinder Care Learning Center, a daycare center in Maple Grove, does offer this drop-in service. They would like to receive a one week notice, but they are willing to work with patients. Their address and contact information is the following:

KinderCare Learning Center
13380 Grove Drive
Maple Grove, MN 55369
(763) 420-9200
Section XII
Support Services
INFERTILITY SUPPORT SERVICES

MCRH will provide referrals to a variety of support services in your area upon request. These services will address the psychosocial and emotional needs of individuals and couples dealing with the stress of infertility.

We are staffed with a licensed social worker who will see patients either on-site or off-site to help people cope with the emotional effects of infertility. The social worker may be utilized before, during and/or after treatment for those whose attempt at pregnancy results in a negative outcome.

All couples and individuals receiving infertility treatment are encouraged to utilize this service. Single visits or ongoing consultations by our professionally trained social worker are available either in person or by phone.

This visit is an opportunity to learn to cope and fully understand the emotional impact of infertility. She will explore and develop with you stress management techniques and ways to implement them in daily living.

Scheduling an appointment with the social worker at her private practice office may be done by calling (952) 925-3533. There will be an additional charge for this service and will be handled directly through the social worker. These visits may or may not be reimbursed by insurance depending upon the terms of your policy.

Other support services offered through MCRH include:

- **RESOLVE of the Twin Cities, Inc.**
  This is a national infertility support group. The goal of this organization is to provide compassionate support and information to people who are experiencing infertility and to increase awareness of infertility issues through advocacy and public information. Call (651) 659-0333 for information on meetings or to get on their mailing list.

- **Quest**
  This is a Christian based support group that meets twice a year for eight sessions. This group is designed to provide spiritual and emotional support for people. Call New Life Family Services at (612) 866-7643 to receive further information about Quest.

- Referral to a specialist in massage and relaxation.

- Referral to adoption resources.

- **Jeanette Truchsess, Ph.D.**
  Psychotherapy, Mind-Body Spirit Approaches, and Infertility and Adoption Counseling
  Call (651) 226-4704 for information.
Infertility Counseling and Support: When and Where to Find It

Infertility is a medical condition that touches all aspects of your life. It may affect your relationships with others, your perspective on life, and how you feel about yourself. How you deal with these feelings will depend on your personality and life experiences. Most people can benefit from the support of family, friends, medical caregivers, and mental health professionals. When considering infertility treatment options such as sperm, egg, or embryo donation or gestational carriers, it may be especially helpful to gain the assistance of a fertility counselor. The following information may help you decide if you need to seek professional help in managing the emotional stresses associated with fertility treatment or need assistance regarding your treatment options.

When do I need to see an infertility counselor?
Consider counseling if you are feeling depressed, anxious, or so preoccupied with your infertility that you feel it is hard to live your life productively. You also may want to seek the assistance of a counselor if you are feeling “stuck” and need to explore your options. Signs that you might benefit from counseling include:
- persistent feelings of sadness, guilt, or worthlessness
- social isolation
- loss of interest in usual activities and relationships
- depression
- agitation and/or anxiety
- mood swings
- constant preoccupation with infertility
- marital problems
- difficulty with “scheduled” intercourse
- difficulty concentrating and/or remembering
- increased use of alcohol or drugs
- changes in appetite, weight, or sleep patterns
- thoughts about suicide or death

Where can I get support?
Support can come from many different sources. Books can offer information and understanding about the emotional aspects of infertility. Support groups and informational meetings can reduce the feeling of isolation and provide opportunities to learn and share with others experiencing infertility. Individual and couple counseling offer the chance to talk with an experienced professional to sort out your feelings, identify coping mechanisms, and work to find solutions to your difficulties. Discussions with supportive family members and friends also can be useful.

How do I find an infertility counselor or other support?
Start by asking your physician for referrals to trained mental health professionals in your area, a list of relevant books and articles, and support resources that deal with fertility-related matters. Counselors may be psychiatrists, psychologists, social workers, psychiatric nurses, or marriage and family therapists. Visit ReproductiveFacts.org and click on the button labeled “Find a Healthcare Professional” for a list of doctors and mental health professionals in your area.

Are there any specific resources available to guide individuals coping with infertility?
There are many resources included on the ASRM patient Website (ReproductiveFacts.org), including frequently asked questions, videos, fact sheets and booklets (many also in Spanish), and ASRM Practice and Ethics statements.

Below are listed several additional resources that may be helpful in addressing a variety of concerns and issues. This list is by no means exhaustive. If you require help regarding other topics, please consult the patient resources section of ReproductiveFacts.org or your healthcare professional.

- American Fertility Association (AFA): An organization created to educate the public about reproductive disease and support families during struggles with infertility and adoption, TheAFA.org
- Choice Moms: An organization to help single women who proactively decide to become the best mother they can, through adoption or conception, choice moms org
- Fertile Hope: A national LIVESTRONG initiative dedicated to providing reproductive information, support, and hope to cancer patients and survivors whose medical treatments present the risk of infertility, fertile hope org
- Frank Talk: A peer-support Website dedicated to helping men deal with erectile dysfunction, FrankTalk.org
- InterNational Council on Infertility Information Dissemination, Inc. (INCIID), inciid.org
- North American Council on Adoptable Children: An organization committed to meeting the needs of waiting children and the families who adopt them, nacac.org
- Parents Via Egg Donation: An organization created to provide information to parents and parents-to-be and to share information about all facets of the egg donation process, parents via egg donation org
- Pop Luck Club: The Pop Luck Club has evolved into a substantial voice, helping to support the growth of our wonderfully diverse LGBT community, popluckclub.org
- RESOLVE: A national infertility support organization, Resolve.org
- Single Mothers by Choice: Offering support and information to single women who are considering motherhood and to single mothers who have chosen this path to parenthood, single mothers by choice.org
- Magazines: Fertility Road, Fertility Magazine, Conceive Magazine, Gay Parent Magazine

Revised 2014

For more information on this and other reproductive health topics, visit www.ReproductiveFacts.org
Section XIII

Financial Arrangements
PREPAYMENT
ANONYMOUS DONOR IVF

Date:

Patient Name:

Patient Account Number or Date of Birth:

Minimum Pre-payment Amount: $20,515.00

Commitment Deposit (if previously paid for this cycle)

Total $_______________________

(Pre-payment does NOT include Monitoring, Medication or Variables.)

1. A check or money order for the amount of ________________ is enclosed.
   Make Payable to: The Midwest Center for Reproductive Health.

2. Please charge my credit card for amount of ________________.

   **Credit Card:**
   VISA      Master Card      Discover      AMEX (please circle one)
   Name on Card: _______________________________________________  
   Card Number: _______________________________________________  
   Security Code: _______ Expiration Date: ____________  
   Address: __________________________ Zip Code: _________________  
   Signature of Card Holder: ________________  

All procedures will be billed through The Midwest Center for Reproductive Health; we are OUT-OF-NETWORK with ALL insurance companies.

**Following the IVF procedure, we will be billing your credit card for any remaining patient responsibility balances for Monitoring, Extended Culture and/or Cryopreservation of Embryos, etc. which were NOT included in the prepayment. Please provide the credit card information for which you would like these services charged.**

**REQUIRED:**

   **Credit Card:**
   VISA      Master Card      Discover      AMEX (please circle one)
   Name on Card: _______________________________________________  
   Card Number: _______________________________________________  
   Security Code: _______ Expiration Date: ____________  
   Address: __________________________ Zip Code: _________________  
   Signature of Card Holder: ________________  

**Fee For Service:** This is for One cycle using fee for service, there are no guarantees or refunds with this program.

**VIP Program:** You would need to notify our staff, qualify for the program, no claims would be submitted to insurance and you would have a greater prepayment.

Please call the Business Office at 763-494-7736 if you have any questions.

Please return this letter along with your payment by The Prepayment Deadline. Thank you
ANONYMOUS DONOR IVF COSTS

Included in this packet is a price list for your upcoming IVF procedures. Please note which fees are included and/or not included in the package price which is due in advance of the beginning of the series.

Someone from the Business Office will be available to meet with you and discuss these costs in greater detail. If you have any questions, please feel free to contact our Business Office at 763/494-7736 or 1-800-508-9763 option 4. Our business hours are 8:00 am to 4:00 pm.

CANCELLATION INFORMATION

In the event that your anonymous donor is canceled prior to your procedure, the only charges you are responsible for are the services you have incurred with our office.

The donor’s charges are not your responsibility if the donor is canceled due to physician’s recommendation and/or the donor’s inability to complete the cycle.

However, if the recipient couple should cancel and their anonymous donor has started her stimulation medications, the recipient couple will be responsible for any charges incurred by their donor up to that point, including the donor management fee of $1,830.00 and $50 per day that the donor has been on her medication.
FULL STIMULATION IVF - ANONYMOUS DONOR

I. Pre-Cycle Costs

II. Cycle Preparation for Recipient

III. Program and ART Management – Donor (included in pre-payment)

IV. Donor Cycle Preparation (included in pre-payment)

V. Donor Insurance Policy (included in pre-payment)

VI. Donor Monitoring (included in pre-payment)

VII. Ovum Harvest (included in pre-payment)

VIII. Embryo Transfer (included in pre-payment)

IX. Variable/Optional Costs

X. Post Cycle Costs*

This itemization does NOT include medication costs for yourself or the donor.

*May be performed by another physician.
I. Pre-Cycle Costs at Clinic (Not included in prepayment)

(All of these procedures may not be done on the same day.)

Recipient Couple

Sonohysterogram/UPT $444.00
Initial consultation with Social Worker 165.00
(Social Worker billed separately)
Cryopreservation of back up semen sample 135.00

II. Cycle Preparation for Recipient (Not included in prepayment)

Recipient

Chlamydia $60.00
Gonorrhea 60.00
Ureaplasma 103.00
HTLV I/II 36.00
Drug Screen -urine 98.00
Abo Blood Type/Rh 21.00
Hepatitis B 22.00
Hepatitis C 38.00
HIV 1 & 2 28.00
Syphilis Testing (Anti TP) 19.00
Capture CMV Total IgM/IgG 21.00
CMV-IgG Specific (if reactive) 82.00
CMV-IgM Specific (if reactive) 82.00
Herpes Culture 69.00
Venipuncture 19.00
Partner Testing approximately 375.00
Monitoring for Recipient (Two ultrasounds and one estradiol) 791.00

Infectious disease testing may be completed by a local physician.
III. Program and ART Management – Donor**  $1,830.00

IV. Donor Cycle Preparation**  $1,000.00

- New Patient office visit
- Donor physical exam by physician
- Initial consultation with social worker
- Infectious disease testing
- Genetic disease testing

V. Donor Insurance Policy**  $250.00

VI. Donor Monitoring**  $1,700.00

- Ultrasounds
- Estradiols
- Venipunctures

VII. Ovum Harvest – Donor**

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrieval by physician</td>
<td>$2,770.00</td>
</tr>
<tr>
<td>Ultrasound guidance for aspiration of ova</td>
<td>$255.00</td>
</tr>
<tr>
<td>Volunteer Reimbursement</td>
<td>$4,000.00</td>
</tr>
<tr>
<td>Total Retrieval Costs</td>
<td>$7,025.00</td>
</tr>
</tbody>
</table>

VIII. Embryo Transfer – Recipient**

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended culture of embryo(s), 4-7 days</td>
<td>$1,200.00</td>
</tr>
<tr>
<td>Preparation of embryo for transfer</td>
<td>$800.00</td>
</tr>
<tr>
<td>Transfer by Physician</td>
<td>$1,500.00</td>
</tr>
<tr>
<td>ART Lab for Culture and Fertilization</td>
<td>$5,210.00</td>
</tr>
<tr>
<td>Total Transfer Costs</td>
<td>$8,710.00</td>
</tr>
</tbody>
</table>

TOTAL PREPAYMENT  $20,515.00

+_________ Precycle Costs Donor/ Self
+_________ Medication Donor/ Self
+_________ Monitoring/ Self
+_________ Variable/ Optional Costs

TOTAL  $_________
IX. Variable/Optional Costs (Not included in prepayment)

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>AZH (if applicable, will be billed)</td>
<td>680.00</td>
</tr>
<tr>
<td>Initial Cryopreservation (if applicable, will be billed)</td>
<td>415.00</td>
</tr>
<tr>
<td>Donor sperm (when stimulation medication is initiated, the specimen is ordered; this fee is non-refundable)</td>
<td>400.00-1000.00</td>
</tr>
<tr>
<td>Sperm ID from testis (if testicular biopsy)</td>
<td>550.00</td>
</tr>
<tr>
<td>Thawing of cryopreserved sperm/semen (each aliquot)</td>
<td>30.00</td>
</tr>
</tbody>
</table>

X. Post Cycle Costs* (Not included in prepayment)

<table>
<thead>
<tr>
<th>Service Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two quantitative BhCG’s w/ blood draw</td>
<td>$226.00</td>
</tr>
<tr>
<td>Initial OB Ultrasound</td>
<td>0.00</td>
</tr>
<tr>
<td>Follow-up OB Ultrasound</td>
<td>190.00</td>
</tr>
</tbody>
</table>

*May be performed by another physician
IVF PAYMENT POLICY

A. The Midwest Center for Reproductive Health, P.A. accepts payment in the form of checks, cash, and credit cards (Visa/MasterCard/Discover/American Express).

B. Prepayment of $20,515.00 is due prior to your medication stimulation. You will receive a separate statement with the amount and date due. All checks should be made payable to The Midwest Center for Reproductive Health, P.A.

C. If applicable, full payment for AZH and cryopreservation of embryos is due once the procedure has occurred. This will be reflected on your monthly billing statement.

D. Letters of insurance pre-determination are not accepted in lieu of payment. Be aware that a pre-determination letter is not a guarantee of payment.

E. We will file to your insurance once the IVF cycle is complete if you have coverage for IVF.

F. All balances over 30 days old must be paid prior to starting IVF cycle.

G. Fees are subject to change without notice.

*(Initial consultation with physician is not included in IVF charges.)*
PREPAYMENT
DIRECTED DONOR IVF

Date:

Patient Name:

Patient Account Number or Date of Birth:

Minimum Pre-payment Amount: $14,815.00

$200.00 Commitment Deposit (if previously paid for this cycle)

Total $____________

(Pre-payment does NOT include Monitoring, Medication or Variables.)

1. A check or money order for the amount of ________________ is enclosed.
Make Payable to: The Midwest Center for Reproductive Health.

2. Please charge my credit card for amount of ________________.

Credit Card: VISA Master Card Discover AMEX (please circle one)

Name on Card: _________________________________________________

Card Number: ____________________________

Security Code: _______ Expiration Date: _______________________

Address: ______________________________________________________

Signature of Card Holder: ________________________________________

All procedures will be billed through The Midwest Center for Reproductive Health; we are OUT-OF-NETWORK with ALL insurance companies.

**Following the IVF procedure, we will be billing your credit card for any remaining patient responsibility balances for Monitoring, Extended Culture and/or Cryopreservation of Embryos, etc. which were NOT included in the prepayment. Please provide the credit card information for which you would like these services charged.

REQUIRED:
Credit Card: VISA Master Card Discover AMEX (please circle one)

Name on Card: _________________________________________________

Card Number: ____________________________

Security Code: _______ Expiration Date: _______________________

Address: ______________________________________________________

Signature of Card Holder: ________________________________________

Fee For Service: This is for One cycle using fee for service, there are no guarantees or refunds with this program.

VIP Program: You would need to notify our staff, qualify for the program, no claims would be submitted to insurance and you would have a greater prepayment.

Please call the Business Office at 763-494-7736 if you have any questions.

Please return this letter along with your payment by The Prepayment Deadline. Thank you.
DIRECTED DONOR IVF COSTS

Included in this packet is a price list for your upcoming IVF procedures. Please note which fees are included and/or not included in the package price which is due in advance of the beginning of the series.

In the event that a cycle is canceled prior to your retrieval, the Commitment Deposit and the Program/ART Management fees for your donor are non-refundable.

Someone from the Business Office will be available to meet with you and discuss these costs in greater detail. If you have any questions, please feel free to contact our Business Office at 763-494-7736 or 1-800-508-9763 option 4. Our business hours are 8:00 am to 4:00 pm.
I. Pre-Cycle Costs

II. Cycle Preparation

III. Donor Insurance Policy (included in pre-payment)

IV. Ovum Harvest (included in pre-payment)

V. Embryo Transfer (included in pre-payment)

VI. Variable/Optional Costs

VII. Post Cycle Costs*

This itemization does **NOT** include medication costs for yourself or the donor.

*May be performed by another physician.
**I. Pre-Cycle Costs at Clinic (Not included in prepayment)**

(All of these procedures may not be done on the same day.)

**Recipient Couple**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sonohysterogram/UPT</td>
<td>$444.00</td>
</tr>
<tr>
<td>Initial consultation with Social Worker</td>
<td>165.00</td>
</tr>
<tr>
<td>Cryopreservation of back up semen sample</td>
<td>135.00</td>
</tr>
</tbody>
</table>

(Social Worker billed separately and subject to change without notice)

**Donor**

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>New patient office visit with physician</td>
<td>$370.00</td>
</tr>
<tr>
<td>Donor physical exam by physician</td>
<td>197.00</td>
</tr>
<tr>
<td>Pelvic ultrasound by physician</td>
<td>223.00</td>
</tr>
<tr>
<td>Initial consultation with Social Worker</td>
<td>165.00</td>
</tr>
</tbody>
</table>

(Social worker is billed separately and subject to change without notice)
II. Cycle Preparation for Recipient and Donor (Not included in prepayment)

**Recipient and Donor**

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>$ 60.00</td>
</tr>
<tr>
<td>Gonorrhea</td>
<td>60.00</td>
</tr>
<tr>
<td>Ureaplasma</td>
<td>103.00</td>
</tr>
<tr>
<td>HTLV I/II</td>
<td>36.00</td>
</tr>
<tr>
<td>Drug Screen – urine</td>
<td>98.00</td>
</tr>
<tr>
<td>AbO Blood Type/ Rh</td>
<td>21.00</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>22.00</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>38.00</td>
</tr>
<tr>
<td>HIV 1 &amp; 2</td>
<td>28.00</td>
</tr>
<tr>
<td>Syphilis Testing (Anti TP)</td>
<td>19.00</td>
</tr>
<tr>
<td>Capture CMV Total IgM/IgG</td>
<td>21.00</td>
</tr>
<tr>
<td>CMV-IgG Specific (if reactive)</td>
<td>82.00</td>
</tr>
<tr>
<td>CMV-IgM Specific (if reactive)</td>
<td>82.00</td>
</tr>
<tr>
<td>Herpes Culture</td>
<td>69.00</td>
</tr>
<tr>
<td>Venipuncture</td>
<td>19.00</td>
</tr>
<tr>
<td>Partner Testing</td>
<td>approximately 375.00</td>
</tr>
<tr>
<td>Monitoring for Recipient (Two ultrasounds and one estradiol)</td>
<td>791.00</td>
</tr>
<tr>
<td>Cryopreservation of back up semen sample</td>
<td>135.00</td>
</tr>
</tbody>
</table>

**Monitoring for Donor**

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blood draw @ 19.00 each</td>
<td>3 - 5</td>
</tr>
<tr>
<td>Estradiol blood tests @ $147.00 each</td>
<td>3 - 5</td>
</tr>
<tr>
<td>Baseline ultrasound @ $350.00</td>
<td>1</td>
</tr>
<tr>
<td>Follicle tracking ultrasounds @ $275.00 each</td>
<td>1 - 5</td>
</tr>
</tbody>
</table>

(If monitoring at Midwest Center, this phase will range from $1123 – 2280.
If monitoring is done elsewhere, one ultrasound and one estradiol with blood draw may be performed at Midwest Center prior to retrieval)

Infectious disease testing may be completed by a local physician.
V. Program and ART Management – Donor** $2,830.00

VI. Donor Insurance Policy** $250.00

VII. Ovum Harvest – Donor**

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retrieval by physician</td>
<td>$2,770.00</td>
</tr>
<tr>
<td>Ultrasound guidance for aspiration of ova</td>
<td>$255.00</td>
</tr>
<tr>
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<td>$3,025.00</td>
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</table>

VIII. Embryo Transfer – Recipient**

<table>
<thead>
<tr>
<th>Service</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extended culture of embryo(s), 4-7 days</td>
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</tr>
<tr>
<td>Preparation of embryo for transfer</td>
<td>800.00</td>
</tr>
<tr>
<td>Transfer by Physician</td>
<td>1,500.00</td>
</tr>
<tr>
<td>ART Lab for Culture and Fertilization</td>
<td>5,210.00</td>
</tr>
<tr>
<td>Total Transfer Costs</td>
<td>$8,710.00</td>
</tr>
</tbody>
</table>

TOTAL PREPAYMENT $14,815.00

+_________ Precycle Costs Donor/ Self
+_________ Medication Donor/ Self
+_________ Monitoring Donor/ Self
+_________ Variable/ Optional Costs

TOTAL

** Included in pre-payment amount
IX. Variable/Optional Costs (Not included in prepayment)

- AZH (if applicable, will be billed) $680.00
- Initial Cryopreservation (if applicable, will be billed) $415.00
- Donor Sperm- (When stimulation medication is initiated, the specimen is ordered. This fee is non-refundable.) $400.00-$1000.00
- Sperm ID from testis (if testicular biopsy) $550.00
- Thawing of cryopreserved sperm/semen (each aliquot) $30.00

X. Post Cycle Costs* (Not included in prepayment)

- Two quantitative BhCG’s w/ blood draw $226.00
- Initial OB Ultrasound $0.00
- Follow-up OB Ultrasound $190.00

*May be performed by another physician
IVF PAYMENT POLICY

A. The Midwest Center for Reproductive Health, P.A. accepts payment in the form of checks, cash, and credit cards (Visa/MasterCard/Discover/American Express).

B. Prepayment of $14,815.00 is due prior to your medication stimulation. You will receive a separate statement with the amount and date due. All checks should be made payable to The Midwest Center for Reproductive Health, P.A.

C. If applicable, full payment for AZH and cryopreservation of embryos is due once the procedure has occurred. This will be reflected on your monthly billing statement.

D. Letters of insurance pre-determination are not accepted in lieu of payment. Be aware that a pre-determination letter is not a guarantee of payment.

E. We will file to your insurance once the IVF cycle is complete if you have coverage for IVF.

F. All balances over 30 days old must be paid prior to starting IVF cycle.

G. Fees are subject to change without notice.

(Initial consultation with physician is not included in IVF charges.)
Section XIV

Glossary
GLOSSARY OF MEDICAL TERMS

Blastocyst
An embryo formed after five to six days in culture.

Down Regulation
Administration of Leuprolide Acetate (Lupron) to suppress the body’s natural hormones.

Ectopic Pregnancy
Implantation of an embryo anywhere but in the uterine cavity (including the fallopian tube, the ovary, or the abdominal cavity).

Embryo
The early stage of fetal growth, from conception to the eighth week of pregnancy.

Embryo Transfer
Introduction of the embryo into the uterus after fertilization has occurred.

Endometrium
The lining of the uterus where the embryo implants.

Estradiol (E2)
The hormone released by the developing follicles in the ovary. Estradiol levels are used to help determine growth and maturity of the follicle during stimulation.

Fallopian Tube
The structure that carries the egg from the ovary to the uterus. This is normally where fertilization takes place.

Fertilization
The penetration of the egg by the sperm and fusion of genetic material that results in the development of an embryo.

Follicle Stimulating Hormone (FSH)
The hormone produced and released from the pituitary gland in the brain that stimulates the ovary to prepare a follicle for ovulation.

Hormone Replacement Therapy
The use of medications to enhance the endometrium for implantation.

Implantation
The imbedding of the embryo in the lining of the uterus.

Ultrasound
High frequency sound waves that form an image on a monitor screen through the insertion of a probe into the vagina. There is minimal, if any, discomfort experienced by the patient. This technique measures endometrial stripe thickness to estimate optimal time for embryo transfer, documents the presence of the fetus in the uterus, and estimates size and gestational age of the fetus.

Uterine Profile
The placement of a small sterile catheter through the cervix to measure the length of the uterine cavity for the purpose of future embryo transfers.