FERTILITY CENTER
www.NYUFertilityCenter.org

New Patient Orientation
Egg Thaw
Meet Our Physicians

Dr. M. Elizabeth Fino
Director, Egg Donor Program

Dr. James Grifo

Dr. Alan Berkeley

Dr. Brooke Hodes-Wertz

Dr. Frederick Licciardi

Dr. David Keefe

Dr. Susan Maxwell

Dr. Lisa Kump-Checchio

Dr. Shannon DeVore
Reproductive Endocrinology Fellows

The NYU Langone Fertility Center (NYULFC) is part of the Division of Reproductive Endocrinology and Infertility (REI) at NYU School of Medicine’s Department of Obstetrics and Gynecology.

Our division offers a 3-year fellowship training program in REI approved by the American Board of Obstetrics and Gynecology. Fellows are licensed physicians and have completed a 4-year residency in OB-GYN prior to sub-specializing in our discipline.

Throughout your time at the NYULFC, you will interact with our fellows who provide clinical care and on-call responsibilities (including emergencies).

Jacquelyn Shaw, MD
Nicole Yoder, MD
Jennifer Blakemore, MD
### Laboratory Schedule

<table>
<thead>
<tr>
<th>Downtime</th>
<th>Scheduling</th>
</tr>
</thead>
</table>
| The NYULFC’s Embryology Laboratory closes for 10 days in August and December to perform extended cleaning and maintenance.

The NYULFC continues to provide monitoring, consultations and non-IVF procedures during the closure periods. |

When scheduling your cycle with our coordinators we will make sure you can meet the cut-off dates before each downtime.

Please contact your Patient Coordinator with any questions you have regarding the cut-off dates.
Prerequisite Tests, Consents & Appointments

- Please note, all required tests (i.e. “checklist”) and insurance pre-certification **must be completed** prior to scheduling the thaw date.

- Please inform us if you or your partner have any medical conditions or allergies, or are on any prescription medications or herbal supplements. Some medical conditions will require documented clearance from your personal physician or specialist prior to treatment. *(Cardiology, Nephrology, etc.)*

- Your “Advance Directive” (if you have one) should be provided at the start of treatment. Information is available from your MD’s assistant.

- All consents for procedures and release forms to use cryopreserved eggs must be completed, properly signed and witnessed prior to starting any treatment or medication. **Please note that some consents require a notary seal.**

**No consents, no precertification or an incomplete checklist means “No Start”**

FAILURE TO COMPLETE ALL PRE-REQUISITE TESTING, PRE-CERTIFICATIONS OR CONSENT SIGNING WILL DELAY YOUR TREATMENT TO A LATER MONTH.
Genetic Testing: Carrier Screening

• Carrier Screening (Recombine or Counsyl) – Patients/Couples
• Tests couple (not embryos) for changes (mutations) in >100 genes
  • Note: We all have genetic mutations, but most do not affect our health or put our children at risk
• Recessive diseases
  • Only high risk if BOTH partners are carriers of SAME disease
  • As long as one partner is negative for a disease, it is low risk
• X-linked diseases
  • High risk if female is a carrier (males not tested)
• ~60% of individuals test positive
  • Vast majority have no family history
  • Not related to age

***Genetic counseling with the associated lab is mandatory***
# Morning Monitoring Hotline

<table>
<thead>
<tr>
<th>Ready to Start</th>
<th>Information to Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please call us at (212) 263-8999 on the day of or evening prior to your:</td>
<td>When calling, please record your name (spell it out), date of birth, treating physician and treatment type:</td>
</tr>
</tbody>
</table>
| • Day-2 or Day-3 start date for Egg Thaw | • Frozen Embryo Transfer  
• Egg Thaw |

Notifying us of your upcoming start will allow your chart to be available before you arrive for treatment.
Day 1 of your cycle is considered full flow menstrual period before midnight (not staining or spotting). Day 2 is the following day.*

*If taking birth control, 4 days after the last active pill.*
Cycle Monitoring

Blood Test and Ultrasound Hours are 7 days a week from 7:00 to 9:00 AM, no appointment necessary.

*Please try to avoid the 8:59 am rush, particularly on the weekends*

Make sure we have a good telephone number with a free voicemail to contact you.
*Expect a phone call from a nurse in the afternoon, usually between 1 pm and 5 pm.*

Please follow instructions exactly.

Call with questions 212-263-8990

The best time to call the nursing staff is 9:30 AM until 5:00 PM
Antibiotics for Male Partner (if appropriate)

• **Purpose:** Protects against infection of the embryos.

• **Type:** Doxycycline

  *Ciprofloxacin will be prescribed for patients allergic to doxycycline. Please inform us if you have an allergy to “Cipro” or other medications.*

• **Administration:** oral medication, 100 mg twice a day *(10 – 12 hours apart)* **for 10 days**, beginning on Day 5 of the female partner’s cycle or when directed by a nurse.

• **Possible Side Effects:** photosensitivity, gastro-intestinal distress.
Embryology Laboratory

Egg with surrounding cells immediately after retrieval

Semen specimen is processed to concentrate motile cells

Mature egg with surrounding cells removed

Embryo that has reached the blastocyst stage (If able, the fertilized egg usually develops to this stage by day 5 or 6 post-egg retrieval)
Embryology and Andrology

- If applicable, the same day the eggs are thawed, the partner produces a fresh sample. Date and time to be determined by the embryology staff.

- If using donor sperm or frozen partner sperm it will be thawed the same day as the eggs.

- Intracytoplasmic Sperm Injection (ICSI) is used to inject sperm into each egg.

- The dish is placed in an incubator where fertilization may occur.

- Any resulting embryos are cultured further and evaluated.

- The patient has the option to cryopreserve (freeze) excess, good-quality embryos. Please note that embryo cryopreservation requires a separate consent form. Frozen embryos are stored here at NYU Langone Fertility Center on the 6th Floor.
## Genetic Testing for Embryos: PGS/PGD

**Preimplantation Genetic Screening (PGS – Reprogenetics)**  
**Preimplantation Genetic Diagnosis (PGD)**

***Genetic counseling with the associated lab is mandatory***

<table>
<thead>
<tr>
<th></th>
<th>What does it test?</th>
<th>Who is a candidate?</th>
<th>What is required?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PGS</strong></td>
<td>Chromosome abnormalities</td>
<td>All individuals/couples</td>
<td>Consultation with Reprogenetics</td>
</tr>
<tr>
<td></td>
<td>- Not inherited, occurs spontaneously</td>
<td></td>
<td>Days 5-7 embryo biopsy</td>
</tr>
<tr>
<td></td>
<td>- Increases with maternal age but occurs in a subset of all eggs/sperm, regardless of age</td>
<td></td>
<td>Cryopreservation of all embryos</td>
</tr>
<tr>
<td></td>
<td>- Mainly associated with failed embryo implantation or miscarriage</td>
<td></td>
<td>FET in future cycle</td>
</tr>
<tr>
<td><strong>PGD</strong></td>
<td>Known mutation(s) in a single gene</td>
<td>Few individuals/couples</td>
<td>Customized set-up with outside lab prior to cycle (takes several weeks)</td>
</tr>
<tr>
<td></td>
<td>- Heritable (passed down in family)</td>
<td></td>
<td>ICSI</td>
</tr>
<tr>
<td></td>
<td>- Associated with known risk for specific disease</td>
<td></td>
<td>Days 5-7 embryo biopsy</td>
</tr>
<tr>
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</table>
Embryo Transfer
Fresh vs. Frozen
• **Purpose:** to enhance the uterine lining’s ability to sustain embryo implantation and pregnancy. Progesterone is needed for both a fresh embryo transfer and a frozen embryo transfer.

• **Administration:** Intramuscular injections or vaginal suppositories. *Do not stop progesterone unless instructed to do so by a staff member.*

• **Possible side effects:** cramping, headache, nausea, breast tenderness, mood swings or vaginal irritation.

• *Please let your physician or IVF nurse know if you have any nut allergies.*
Fresh/Frozen Embryo Transfer

Plan to visit us on Day-2 of your menses between 7:00 and 9:00 AM for a blood test and sonogram. A nurse will notify you if your results are acceptable to start.

If doing a “Hormone-Replaced” cycle, you will be instructed to begin Estrace.

If doing a “Natural” cycle, a regular cycle of about 28 days is necessary. We are relying on your internal ovarian function to make decisions and will require more visits to the office and flexibility in your schedule.

*In either case, you need prescriptions for Progesterone supplementation. For the “Natural” cycle, an ovulation trigger may also be required.*

You will then be instructed to visit us around day 12 between 7:00 and 9:00 AM for a blood test and a sonogram. A nurse will call you with the transfer date and instructions regarding the embryo transfer and the start date for Progesterone.
In the Laboratory
What Happens to your Eggs, Sperm and Embryos

Fresh Embryo Transfer

Day 0
Egg Thaw, Sperm Preparation, Insemination/ICSI

Day 1
Fertilization Check, Call with Fertilization Results

Days 5 & 6
Embryo(s) selected for transfer based on best quality, most advanced in development

Call from nursing on day 8 post egg thaw to inform you if and how many embryos were frozen.

Pregnancy test 9 days after transfer.

Follow instructions for when to begin Progesterone administration.
Fresh Embryo Transfer

The procedure is scheduled for 5 days after the thaw and insemination. Embryo(s) selected for transfer are based on the embryo grading system by the laboratory. The NYULFC physician will advise each patient on the day of the procedure about the number of embryos to be transferred.

*(Information about embryo grading is provided on a handout in your orientation materials)*
In the Laboratory
What Happens to your Eggs, Sperm and Embryos

PGD/PGS with Frozen Embryo Transfer

Day 0
Egg Thaw, Sperm Preparation, ICSI

Day 1
Call with Fertilization Results

Day 3
Embryologist will create opening in outer shell (zona ablation)

Days 5-7
Biopsy is performed on all suitable blastocysts, which are then frozen pending genetic results

*The frozen embryo transfer will occur in a later cycle after results are received*

Call from nursing on day 8 post egg thaw to inform you if and how many embryos were biopsied/frozen.

Call from nursing within 7-10 days after biopsy to inform you of PGD/PGS results.
Frozen Embryo Transfer (FET)

A treatment plan should be discussed with your NYULFC physician and a cycle reservation should be in place prior to the start of the cycle. Insurance authorization, consent forms, and prerequisite blood tests may also be required.

Embryo(s) selected for thaw and transfer will be based on the following criteria in this order:

1. Results of PGD/PGS testing (if applicable)
2. Best-quality embryo as graded by the laboratory
   *(Information about embryo grading is provided on a handout in your orientation materials)*
Fresh/Frozen Embryo Transfer

Selected embryo(s) are transferred directly into the uterus during a 5-15 minute procedure; sedation is not usually required and there is no recovery period. You will be allowed to get up and leave immediately after the transfer procedure.
Single Euploid Embryo Transfer (SEET)

The NYULFC strongly encourages the transfer of a single, chromosomally-normal (euploid) embryo to increase the chance of a healthy pregnancy and live birth.
Risks of Multiple-Gestation Pregnancies

The risk of perinatal death in
• Twins is 4 times higher than for singletons
• Triplets is 10 times higher than for singletons

Other risks associated with twin pregnancies include
• 2.4 times higher likelihood to develop pre-eclampsia
• 6.8 times higher likelihood to use sick leave
• 3.5 times higher likelihood to be hospitalized during pregnancy
• 10 times higher likelihood to have preterm labor
• 2 to 3 times more likely to require a Caesarian section
• Additional stress on parents
• Additional stress on siblings
• Long-term costs for minor and major handicaps
Post-Transfer Monitoring
(Luteal Monitoring)

- **Progesterone blood test:** day of embryo transfer

- **Pregnancy blood test:** 9 Days after embryo transfer (mandatory), which is repeated one week later if positive, and sooner if deemed appropriate by the physician on duty.

- **Pregnancy ultrasound:** 3 weeks after the embryo transfer if the pregnancy test is positive

- **Transfer to obstetrician of your choice:** once detection of fetal heartbeat is documented
Ectopic Pregnancy

• The embryo(s) is placed in the uterus, but can implant in the fallopian tube, or more rarely, in the cervix.

• An ectopic pregnancy is not a viable pregnancy.

• Tubal pregnancies occur in about 2-3% of IVF pregnancies.

• Tubal adhesions increase the risk of an ectopic pregnancy.

• Treatment of ectopic pregnancy includes medication (methotrexate) and/or surgery.
Issues to Consider Before Egg Thaw

• Number of embryos to transfer
  • Multiple pregnancy and associated risks
    • Elective reduction of multi-fetal pregnancy
    • Preterm labor and cesarean delivery
    • Prematurity

• Cryopreservation of additional embryos
  • The decision to cryopreserve is an important one that should be considered prior to creating embryos
    • In the event of death or divorce
      • Custody
      • Donate to research
      • Decision to discard
Measles

**EFFECTIVE IMMEDIATELY**

Female patients are now required to show evidence of immunity to Measles as a part of the fertility care plan checklist.

If immunity is not shown via the blood test you **must receive the vaccination** from your primary care provider and provide us with proof of vaccination. If applicable, your partner should also consider having immunity tested.

An embryo transfer cannot occur until one month after vaccination to prevent exposure risk to a developing fetus.
Zika Virus

Avoid traveling to Zika-infected areas.

Check the CDC website frequently as it is constantly changing.
  • Geographic areas affected
  • Protection against infection
  • www.cdc.gov/zika
Wellness Program
Monthly Calendar of Wellness Events Can Be Found in the Lobby
For Information and Support . . .

- Ask questions during your visits or call us at (212) 263-8990 during the hours of 9:00AM to 5:00PM. During these hours, we use a daytime call center to take your message. Please leave a message and our staff will return your call within 60 minutes.

- Information resources are available online at ASRM.org, resolve.org, cdc.gov/art, and SART.org

- Visit our web site at www.NYUFertilityCenter.org
  - Injection training videos are available (English and Spanish) through our website on the page entitled: Patient Forms, Orientation & Videos page

- Wellness program services are most effective when started prior to treatment, but can be utilized at any time.
Genetic Counseling

Andria G. Besser, MS, Certified Genetic Counselor
Located onsite and available for appointments Monday through Friday (9am – 5pm).

Indications for Genetic Counseling include:
• Personal or family history of genetic disease, chromosome abnormality, or birth defect
• Couples at-risk for genetic disease (both carriers of same disease)
• Female carriers of X-linked diseases
• Further discussion of genetic test results (carrier screening, PGD/PGS)
• Strong family history of cancer OR history of certain cancers before age 50
• General concerns about genetic risk factors

Email Andria.Besser@nyumc.org or call her at (212) 263-1149 to make an appointment. If not covered by insurance, the cost of an appointment is $175.
• Consultations, treatment/support sessions for couples and individuals
  • Consults are mandatory for all patients using donor gametes
  • Any patient/couple may utilize the services of our psychologists.
    If interested, please call for information or to book an appointment: (212) 263-0054

• Patient support groups available for stress management and donor egg

• Therapies related to the mind-body connection and IVF
Acupuncture Services

- Services are provided by Lara Rosenthal, L.Ac., and Sara Frohlich, L. Ac.
- Offered onsite 4 days of the week. Offsite appointments are also available. If interested, call 212-807-6769.
- Can safely be used prior to and concurrent with fertility medications and procedures.

Mind/Body Support Group

- Services are provided by Helen Adrienne, LCSW, BCD.
- Offered as a series of individual classes, a one-day group program or individual consultations are also available. If interested, call 212-758-0125.
- Main goal is to help patients realize that while you can’t control infertility, you can control how you navigate it.

Yoga for Fertility

- Services provided by Barrie Raffel (371 Amsterdam Avenue). If interested, contact barrieraffel@earthlink.net
- Safe to practice at any time during your treatment.

Nutrition for Fertility

- Services provided by Bridget Murphy, MS, RDN, CDN
- Can be started at any time during your treatment. If interested, email Bridget.Murphy@nyumc.org.
Program Consent Forms
Required Prior to Cycle Treatment Start

• Embryo Cryopreservation and Egg Thaw Consent

• Frozen Embryo Transfer (FET)

• Donor Sperm (if needed) – An additional consent is required for the use of donor sperm

• Release for Frozen Sperm – A release is required before a frozen sperm specimen can be thawed – *this is required for either donor sperm or sperm from a male partner. If the sperm is from a male partner, the male must consent to its thaw and usage before thaw can occur.*

• PGD/PGS (if needed) – Be sure you have received the PGD/PGS packet and have confirmed the PGD/PGS schedule with Reprogenetics or other PGD lab directly.

• Patient must initial each page and sign and date the last page.
• Spouse or Sexually Intimate Partner (if applicable) must initial each page and sign and date the last page.
• Do not use a checkmark for consent elements that require a specific decision.
Abnormal, Mosaic, and Undiagnosed Embryos

You, and your partner if applicable, should discuss your options and come to an agreement about how to manage abnormal, mosaic and undiagnosed embryos before completing the PGS Consent form.

<table>
<thead>
<tr>
<th>Type of Embryo</th>
<th>Discard</th>
<th>Donate to Research</th>
<th>Transfer (after consult)</th>
<th>Cryostorage (add’l fees)</th>
<th>Re-Biopsy (add’l fees)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abnormal</td>
<td>✓</td>
<td>✓</td>
<td>❌</td>
<td>✓</td>
<td>❌</td>
</tr>
<tr>
<td>Mosaic</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>❌</td>
</tr>
<tr>
<td>Undiagnosed</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Because some patients may ultimately decide to use their mosaic or undiagnosed embryos FC will continue to store these embryos until instructed otherwise. Continued storage will incur storage fees for which the patient is responsible. You will have the opportunity to speak with your doctor to discuss options in light of your results.
Research at the NYULMC Fertility Center
Research at the NYULFC

The NYULFC is dedicated to the mission of advancing science and improving healthcare through scientific discovery.

As a leading center in academic research, our faculty and staff are actively engaged in multiple research studies at any one time which we hope will advance and improve infertility benchmarks and fertility treatment options.

The purpose of our sample collection and repository is to enable the research use of superfluous biospecimens, which are not needed for diagnostic or clinical use and which would otherwise be discarded.
Research Participation

- **Participation in research studies is voluntary**, which means it is your choice if you would like to participate or not. Your decision whether or not to participate will not affect the care you receive during your treatment cycle.

- **Providing consent** for research does not impact your medical treatment in any way.

- **Research consents** must be witnessed by an NYU Langone Fertility staff member.

- Our research studies follow a transparent process of independent **Institutional Review Board (IRB)** evaluation and careful informed consent. The IRB reviews all proposed studies and ensure that they are conducted in a manner which safeguards and promotes the health and welfare of subjects.
• **The goal of our research is to** optimize fertilization, embryo development and culture, in vitro maturation, cryopreservation, understanding egg and embryo viability as well as other clinical indications of infertility.

• **Our research studies use biological material** (procedural by-products, non-viable specimens or materials deemed non-usable to create live-born pregnancies) from your cycle that would normally be discarded during the routine course of your cycle.

• **Discarded biological materials may include** collection of minimal residual sample from sperm preparations, granulosa cells, cumulus cells, fluids from the ovarian follicles that are harvested during oocyte retrieval, immature oocytes, abnormally fertilized oocytes or embryos of such poor quality that are not suitable for transfer.

• **Research conducted using these otherwise discarded biological materials** will help us learn more about factors of fertility and infertility in order to better understand various reproductive disorders.
If you have questions about the research or your participation you can e-mail the senior clinical research coordinator at Fang.Wang@nyulangone.org