



IVF / ICSI Cycle Handbook

Reception: +353 1 556 7900

Contents

3 Before Treatment

- 3 Tests Required
- 3 Infection Screening
- 3 Treatment Scheduling Phone Call
- 4 IVF/ICSI and Cryopreservation Treatment Consent
- 4 Look After Yourself
- 5 Support and Counselling
- 5 Optimising Diet and Lifestyle
- 6 Prescription and Pharmacy Guidance
- 6 Rockfield Pharmacy Information

7 During Treatment

- 7 Overview of Process
- 8 Preparation for Egg Collection
- 8 Ovarian stimulation
- 9 Monitoring follicle growth
- 9 Preventing natural ovulation
- 9 Downregulation
- 10 Antagonist
- 10 Trigger injection
- 11 Measuring Progesterone Levels
- 11 Medication Side Effects

12 Procedure

- 12 Egg Collection
- 12 Overview
- 12 Patient's Preparation for Procedure Day prior to procedure
- 12 Day of the procedure
- 13 Egg Collection Risks
- 13 Sperm Collection
- 14 2-3 Day Rule
- 14 Sperm Collection Instructions
- 15 Fertilisation and embryo development
- 15 Combining egg and sperm
- 15 Fertilisation
- 16 Embryo development

17 [Preparation for Transfer](#)

- 17 Progesterone Luteal support
- 17 Progesterone Support Instructions
- 17 Deciding when to Transfer
- 18 Deciding How Many to Transfer

19 [Embryo Transfer](#)

- 20 Instructions for Embryo Transfer
- 20 After Embryo Transfer

21 [After Treatment](#)

- 21 Pregnancy testing
- 21 Positive Outcome
- 21 What to Expect During Your Fetal Heart Scan
- 21 Your pregnancy test is negative

22 [Freezing Embryos](#)

- 21 Using frozen embryos
- 21 Frozen Embryo Transfer Cycles

22 [Cancelled/failed cycle](#)

- 22 Ovarian cysts
- 22 Ovarian hyperstimulation syndrome (OHSS)
- 23 Freeze All
- 23 Failed/inadequate stimulation
- 23 Failed or abnormal fertilisation
- 24 Nothing to transfer

25 [Early Pregnancy Miscarriage](#)

- 25 Suspected Miscarriage

Before Treatment

Tests Required

The following tests are required to be carried out prior to IVF or ICSI treatment by the partner undergoing the egg collection.

- TSH (Thyroid Function Test)
- Chlamydia
- Body Mass Index (BMI)
- Blood Pressure
- Full Blood Count (FBC)

These are the standard tests required. Based on your circumstances, your doctor may request further investigations.

Our administration and nursing teams will contact you to schedule these tests.

Infection Screening

- For IVF and ICSI cycles, HIV and Hepatitis Screening is required. This is done at Merrion Fertility Clinic.
- These are blood tests and must be performed within 3-months of egg collection and sperm collection procedures (if applicable). Our nursing team will contact you to schedule this test.
- You will also be asked to complete an Infection Risk Declaration Form. This will be sent to you via email. This must be completed by each partner (if applicable).

Treatment Scheduling Phone Call

- Our nurses will contact you to discuss provisional dates for your treatment cycle. Your start date will be based on your menstrual cycle, as guided by our nursing team.
- The nurse will tell you when you need to next contact the clinic to confirm your start dates – this will usually be Day 1 of your menstrual cycle.

IVF ICSI and Cryopreservation Treatment Consent

- Before beginning treatment, you must agree and sign a consent form.
- There are several options you must consider and agree with your partner (if applicable)
- You will be sent the consent and will have ample time to consider the options.
- Please watch this video, which serves as supplementary material for understanding consent.

[IVF/ICSI Consent](#)

- If you have any concerns about the consent, please feel free to contact us through the patient portal, and we will gladly address any questions or requests you may have.
- Please make sure the consent is completed and signed with enough time before treatment begins, as it's important that everything is understood beforehand.

Before Treatment

Look After Yourself

Merrion Fertility Clinic are here to support you through your IVF/ICSI cycle and it is important to understand what the treatment entails.

As well as being physically demanding, treatment can also be mentally and emotionally demanding. It is important to take care of your physical and mental health during this time.

The desire to have a child is natural and, when month after month conception does not occur, feelings of anger, shame, guilt, powerlessness, and despair may develop. Everyone's emotions are different and there is no right or wrong way to feel.

Relationships with your partner, family members and friends may become strained leading to a breakdown in communication and feelings of isolation. There are many difficult decisions that must be made, and unsuccessful treatment cycles may be disappointing.

Try different coping mechanisms.

- These can look different for everyone. Do something that makes you feel good. Whether it is reading a book, journaling, talking to a friend or going for a walk.
- Get support.
- Consider getting professional support through counselling.
- Join a support group to talk to others who are going through fertility treatment.

Support and Counselling

Merrion Fertility Clinic does provide a counselling service as well as a support group. Additional support may be helpful throughout your treatment. The support group is free for patients, however the individual counselling sessions have an additional charge.

For further information please visit

- [Merrion Fertility Clinic Counselling Services](#)
- [Merrion Fertility Support Group](#)

When using donor sperm, one session of implications counselling is mandatory.

This is to allow patients to explore the emotional, social, ethical, and legal implications of using donor sperm to conceive a child. The primary goal of implications counselling is to ensure that individual or couple fully understand the potential consequences and challenges associated with using donor gametes and to help them make well-informed decisions.

Before Treatment

Optimising Diet and Lifestyle

While undergoing treatment it is important to prepare your body for pregnancy.

- Continue to take folic acid, vitamin D and any other supplement recommended by your doctor.
- Regular exercise is recommended and avoid drinking excessive alcohol intake and smoking.
- For further information and guidance see [Merrion Fertility Clinic Nutritional Advice](#)

If you are concerned about your diet, Merrion Fertility Clinic works with a dietician. - Orla Walsh Nutrition. Please inform our administration team if you wish to be referred.



Important: Please refrain from commencing any prescribed medication until instructed by the nursing team. As your medication is tailored to your specific circumstances, we strongly advise against following guidance or instructions from alternative sources. If you have any uncertainties regarding your medications, we encourage you to seek clarification from the nursing team

Safe Disposal of Needles and Medications

- Some medications may need to be administered by injection, so it is important to manage needles safely throughout your treatment cycle.
- When dispensing your medication, the pharmacy will provide a sharps container (a small plastic bucket) for the safe storage and disposal of used needles. Please use this container for needle disposal only.
- At the end of your treatment cycle, return the full sharps container and any unused medication to a pharmacy for safe disposal.
- Please note that Merrion Fertility Clinic cannot accept used needles, sharps containers, or medications, so we kindly ask that you do not bring these items to the clinic.

Before Treatment

Prescription and Pharmacy Guidance

Your treatment plan will involve taking prescribed medications under the guidance of our clinical team. The details related to fertility medications can be intricate and require the expertise of experienced pharmacists. To ensure comprehensive support for our patients, Merrion Fertility Clinic has partnered with Rockfield Pharmacy located in Dublin 16.

Rockfield Pharmacy specializes in fertility medications and has a dedicated team to assist individuals undergoing fertility treatment. This partnership aims to simplify the process for patients while also having experts advise in the distribution of these medications.

Once your prescription is ready, it will be securely transmitted to Rockfield Pharmacy through the secure Healthmail network. Upon receipt, a representative from Rockfield will contact you by phone to offer the following options:

1. **Home Delivery/Courier Service:** Choose to have your medications delivered to your residence. This service is provided free of charge and is available to residents anywhere in Ireland.
2. **In-Person Pickup:** Opt to personally collect your medications from the Rockfield Pharmacy location.
3. **Alternative Pharmacy:** Select the option to have your prescription sent via Healthmail to a pharmacy of your choosing within the Republic of Ireland.

If you decide on option one, medication delivery, please note that this arrangement is between you and the pharmacy. It's important to be aware that Merrion Fertility Clinic bears no responsibility for any delivery-related issues. We also want to emphasize the stringent data protection and confidentiality measures in place with Rockfield Pharmacy.

Your information's security is well preserved through appropriate safeguards. It's worth noting that Rockfield Pharmacy will only have access to information present on the prescription and your contact number. Access to your medical records will not be granted.

Our priority is to facilitate a smooth and secure medication acquisition process, ensuring your comfort and well-being throughout your fertility treatment journey. If you have any questions or require further clarification, please feel free to contact our team.

Rockfield Pharmacy Information

Address: Rockfield Pharmacy, Balally
Luas Stop, Dundrum, Dublin 16

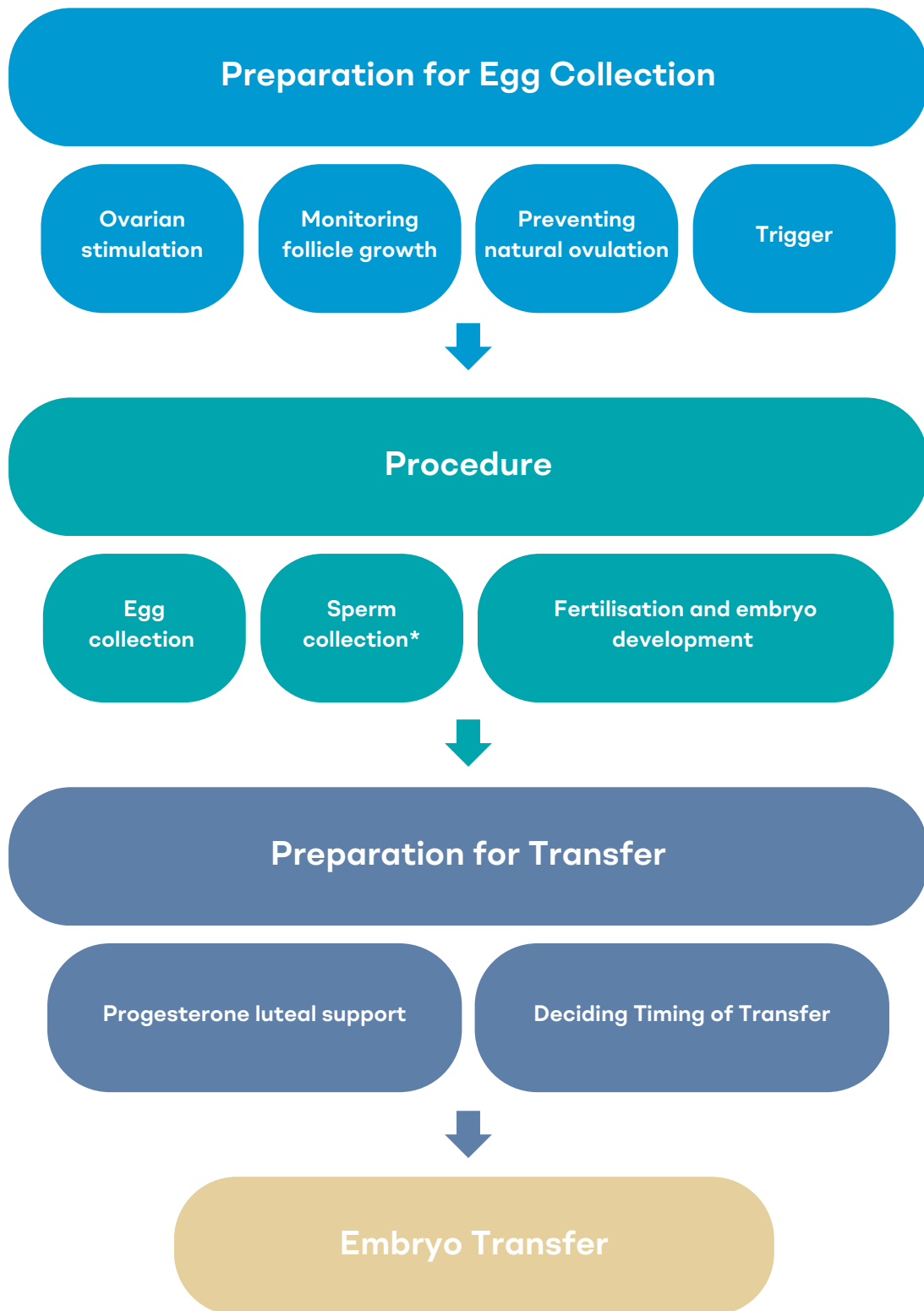
Contact Number: (01) 296 7340

Opening Hours:

Monday 9 a.m. – 7 p.m.
Tuesday 9 a.m. – 7 p.m.
Wednesday 9 a.m. – 7 p.m.
Thursday 9 a.m. – 7 p.m.
Friday 9 a.m. – 7 p.m.
Saturday 12p.m. – 7 p.m.
Sunday Closed

During Treatment

Overview of Process



* Sperm collection step is only relevant for partner donated sperm.
This step is not applicable for donor donated sperm cycles.

Preparation for Egg Collection

Ovarian stimulation

Naturally, ovaries would usually produce one egg per cycle. For IVF/ICSI we need the ovaries to produce multiple eggs. We achieve this through a process called ovarian stimulation.

Why?

- The more eggs that are collected, the more embryos can be created.
- However, not all eggs retrieved in a cycle will fertilise (usually 50–70% do) and not all fertilised eggs will go on to form healthy embryos (about 50% do).
- Most IVF programmes aim to stimulate somewhere between 8 and 14 eggs during each treatment cycle.

How?

- Stimulation involves the injection of medications for 8-14 days.
- The dose is decided for each patient individually.
- Eggs cannot be seen but follicles (a follicle should have an egg) can be seen clearly on ultrasound scan.
- If you are having sexual intercourse, it is essential you use barrier protection from the outset of your stimulation.

Stimulation Timing

- The nurse will give you instructions for starting your stimulation medication.

Stimulation Medications

- As every patient's stimulation is different – please see the instructional videos that is relevant to your treatment.
- For your individual dosage requirements and timings for these drugs, please refer to the information provided to you by the nurses.
- Please note the correct storage temperature of each medication, as advised by your pharmacist.

Gonal-F [Instruction Video](#)

Menopur [Instruction Video](#)

Luveris. [Instruction Video](#)

Rekovele [Instruction Video](#)

Pergoveris [Instruction Video](#)

Monitoring follicle growth

- Throughout the stimulation phase, the growth and number of ovarian follicles are monitored using vaginal ultrasound scans and sometimes blood tests.
- Generally, 2-5 monitoring visits are required.
- After 7-12 days of stimulation injections, the follicles will almost be mature.

Preventing natural ovulation

- To collect the eggs for IVF, the eggs need to remain in their follicles. Therefore, the ovaries must be prevented from ovulating.
- Stimulation causes oestrogen levels to rise, and this could induce ovulation. Therefore, a second type of hormone must be introduced to control this.
- Two treatments have been developed to prevent spontaneous ovulation: 'downregulation' and 'antagonist'.
- When undergoing IVF/ICSI your doctor will select the optimal strategy for you as part of your treatment plan.

Downregulation

- Medication is started 2-3 weeks before stimulation drugs and continued until just before egg collection.
- Either nasal spray or morning injection, is usually started on Day 21 of your menstrual cycle. Please see the instructional videos below for the downregulation injection if applicable to you.
- Please note the correct storage temperature of each medication, as advised by your pharmacist.
- If you are having sexual intercourse, it is essential you use protection from Day 1 of your cycle.

Buserelin [Instruction Video](#)



Antagonist

- Medication is added several days after starting hormonal stimulation and continued until just before egg collection.
- The first daily dose of your Antagonist medication (Cetrotide) will be advised by the nurse when you attend for your scan appointment. This is in injection form.
- If you are having sexual intercourse, it is essential you use protection from the outset of your stimulation.

Please see the instructional videos below for the agonist injection applicable to you. Please note the correct storage temperature of each medication, as advised by your pharmacist.

Cetrotide [Instruction Video](#)

Trigger injection

- When some of the follicles have reached the required size, the woman is ready for the trigger injection.
- A 'trigger' injection starts the process of oocyte maturation. This is the egg's final stage of development.
- **Timing of the injection is critical.**
- Typically, the injection is given 36 hours before the procedure is scheduled.
- The specific information for this will be personalised for you, and will be provided by the nurses in advance of undergoing your treatment.
- In some circumstances, both Ovitrelle and Buserelin injections will be recommended.

Please note the correct storage temperature of each medication, as advised by your pharmacist. Please see the instructional videos below for the trigger injection specific to you.

Ovitrelle [Instruction Video](#)

Buserelin [Instruction Video](#)

Measuring Progesterone Levels

- High progesterone levels are associated with reduced success rates after embryo transfer.
- In order to time your embryo transfer for the most optimal time, your progesterone level will be measured.
- This is a blood test taken by one of our nurses at your final scan appointment.

Medication Side Effects

It is common to experience minor side effects while on treatment. These may include:

- mild bruising at the site of injections
- headaches
- mood changes
- menopausal symptoms
- hot flushes (for those using downregulation) mild abdominal bloating and nausea

These side-effects are usually short-lived and are generally no cause for concern. If they are bothering you, don't hesitate to discuss any of these symptoms with the nursing team as they may be able to adjust your medication or offer other help.

Please Note: For safety or clinical reasons, there may be circumstances where your egg collection procedure cannot proceed if it is considered not to be in your best interest. Further details are provided on page 23.



Procedure

Egg Collection

Overview

- Egg collection is a minor surgical procedure.
- It involves passing a fine needle through the top of the vagina and then into the ovaries.
- This procedure is done using ultrasound. This means that the doctor can see the needle, the follicles and the ovaries at all times.
- Using gentle suction, each follicle is drained, collecting the eggs that are within.
- The fluid that is drained is monitored by an embryologist and examined under a microscope.
- The patient is sedated for this procedure.
- A Consultant Anaesthetist administers the sedation and monitors the patient throughout the procedure.
- Most patients do experience some discomfort after the egg collection procedure. The level of discomfort varies for each patient.
- It is generally advised that all patients rest and do not go to work the day of the procedure or the day after.

Patient's Preparation for Procedure Day prior to procedure

- This is a 'drug free day'. You should not be taking any medications on this day.
- As the egg collection is carried out under sedation, you will need to follow strict fasting guidelines before the procedure. These may vary depending on your medical history, so please follow the instructions provided to you via the patient portal.
- If you are taking any other medication, please inform the nursing team.
- The timing of this procedure is crucial and has been specifically chosen for your treatment plan. Please plan ahead and be organised to arrive on time for your appointment.
- You will receive a detailed, personalised set of instructions via a portal message before your procedure. Please follow only the guidance provided by our nursing team.

Day of the procedure

- Please continue to follow fasting guidance until after the procedure.
- Please allow for spending approx. 3 hours at the clinic.
- If applicable, your partner must also attend for sperm collection at this time.
- As the eggs being collected are microscopic, great care is taken to ensure the environment they are exposed to is free from any potential contaminants. This means that it is important not to wear make up, nail polish, perfume, heavily scented deodorant, or jewellery.

- The length of the procedure is typically 5-15 minutes, but can be longer in some circumstances.
- After the procedure you will be monitored by our nurses while you recover from the sedation.
- You will discuss with the clinical team regarding the number of eggs that have been collected.
- The nurses will provide you with post operative instructions such as pain relief.
- The nursing team will also provide information regarding progesterone luteal support medication.

Egg Collection Risks

As with any surgical procedure, there are potential risks associated with egg collection. Mild pain in the first 48–72 hours is normal and usually well controlled with simple painkillers.

- We recommend paracetamol-based drugs rather than non-steroidal anti inflammatory drugs such as ibuprofen.
- It is also better to avoid drugs containing codeine as this can cause constipation, common after egg collection.
- It is common to have a small amount of vaginal bleeding after the procedure.
- Injury to internal organs (bowel, bladder, blood vessels) from the needle used during the procedure is also extremely rare (less than 1 in 1,000).
- Rarely, there will be an adverse reaction to the drugs used for sedation and pain relief during the egg collection (approx. 0.4 per 1000).



Sperm Collection (not applicable for donor cycles)

- On the same day as your partner is undergoing the egg collection procedure, you will be required to produce a semen sample.
- It will be discussed with the lab team at Merrion Fertility Clinic whether the sample can be produced at your home or in the clinic. Typically, if it is possible for you to get to Merrion Fertility Clinic within an hour of sample production, it is possible to do this at home.
- If you have concerns about being able to produce a sample on the day of egg collection, it is very important to let the nursing team know in advance.
- This can be accommodated by having you producing a sample in advance of the egg collection procedure and freezing the sperm until the eggs are collected.
- If you do not have frozen sperm, and are unable to produce sperm on the day, medications such as Viagra or Cialis can be prescribed for you.

2-3 Day Rule

- In order to optimize the quality of the sperm, it is recommended that you abstain from ejaculating at least 2 days prior to producing the sample for treatment.
- However, prolonged abstinence can also negatively affect sperm quality. You should not abstain for longer than 3 days.

Sperm Collection Instructions

- Wash the genital area thoroughly on the morning of sample production
- Wash hands immediately before and after sample production.
- Always use the sample container provided by Merrion Fertility Clinic, other containers may be toxic to sperm.
- Do not use any lubricants or other products.
- Do not collect the sample using a condom.
- The sample should be provided by masturbation only. Do not produce the sample by withdrawal during intercourse.

If producing sample at home

It is preferable for the sample to be collected at the clinic. However, for various reasons a patient may opt to produce the sample off site.

The following guidelines are crucial when transporting a sample to the clinic

- For the quality of the sperm to be maintained, it is important that the sample is transported at body temperature. You can do this by keeping it close to your body e.g. inside your jacket. Do not transport the sample in a bag.
- The sample must be received within one hour of production. Delays can cause the sperm motility to decrease, therefore please provide the sample to our lab team as soon as possible.



Fertilisation and embryo development

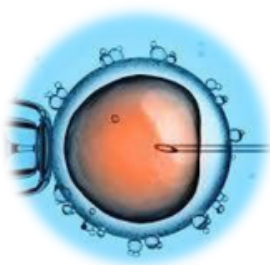
Now that the eggs and sperm have been retrieved, our lab team begin the process of creating embryos.

Combining egg and sperm

- Eggs are combined with sperm in the afternoon following the egg collection ('Day 0') and are left overnight to fertilize.
- There are two ways to inseminate eggs:



Standard IVF: motile sperm (100,000) are mixed with the eggs overnight



ICSI (intracytoplasmic sperm injection): used when there are not enough motile, normal sperm for standard IVF. An individual sperm is selected and injected directly into a mature egg under a microscope.

- Based on previous semen analyses, you will have been recommended either IVF or ICSI.
- Sometimes the sperm produced on the day is not suitable for IVF, and the cycle will be converted to ICSI. This will be decided on the day and will be communicated to you.

Fertilisation:

- On the morning following egg collection ('Day 1'), the eggs and sperm are checked by an embryologist.
- Typically, about 50-70% of the eggs collected will be fertilized. However, this varies for each patient.
- The embryologist assessment identifies fertilized eggs as well as unfertilized eggs and abnormally fertilized eggs.
- The embryologist will phone you and provide you with this 'Day 1 Update'.
- Unfertilised and abnormally fertilised eggs are discarded. These are genetically abnormal and will never lead to a healthy pregnancy.

Embryo development

- After approximately 24 hours, a normally fertilised egg should divide into 2 cells. At this stage, it is called an embryo.
- These 2 cells subsequently divide into 4 cells, then 8, then 16 and so on.
- By Day 4 of development, the number of cells is now too great to be counted individually, and the embryo has formed what is called a morula.
- From this point on, the embryo is beginning to develop into what we call the blastocyst stage.
- Our embryology team will keep you updated on the development of your embryos, most often on D3 and D5.



Preparation for Transfer

Progesterone Luteal support

- Progesterone plays an important role in preparing the endometrium (lining of the womb/uterus) to accept and support an implanting embryo.
- This progesterone support is commonly taken as a vaginal tablet or gel, injection, or oral medication. You will be prescribed the most appropriate support for you.
- Luteal support is started either the day of egg collection or the following day and is continued up at least until the time of your pregnancy test.
- Our nursing team will provide guidance on what will work best for you.
- Further information will be provided to you in 'Recovery Following Egg Collection & Preparation for Embryo Transfer' information leaflet. You will receive this leaflet after your egg collection procedure.

Progesterone Support Instructions

- If the progesterone support prescribed for you is an injection form. Please refer to the video below.
- For your individual dosage requirements and timings for these drugs, please refer to the information provided to you by the nurses.
- Please note the correct storage temperature of each medication, as advised by your pharmacist.

Prolutex / Lubion [Instruction Video](#)

Please note that in this video, the nurse will prepare Prolutex; however, the same steps can be applied to prepare Lubion.

Deciding when to Transfer

- Depending on the number and quality of embryos in culture, a decision is made as to the optimal day to transfer the embryo(s).
- Embryo transfer will take place 3 or 5 days after egg collection.
- If a couple have more than one embryo, we recommend allowing them to continue to grow in the incubator until Day 5 or blastocyst stage. This gives us the maximum amount of information about the embryos and enables the embryologist to choose the best embryo for transfer.
- If there is only one embryo developing on Day 3, then we suggest a Day 3 transfer.

- However, a Day 5 transfer is also an option, but as there is only one embryo available, there is a possibility this embryo will not develop to Day 5.
- Some patients prefer this option as they will have the knowledge that the embryo has developed to the Day 5 stage (blastocyst), rather than having a Day 3 transfer and having to wait 2 weeks to do a pregnancy test that was ultimately going to be negative.

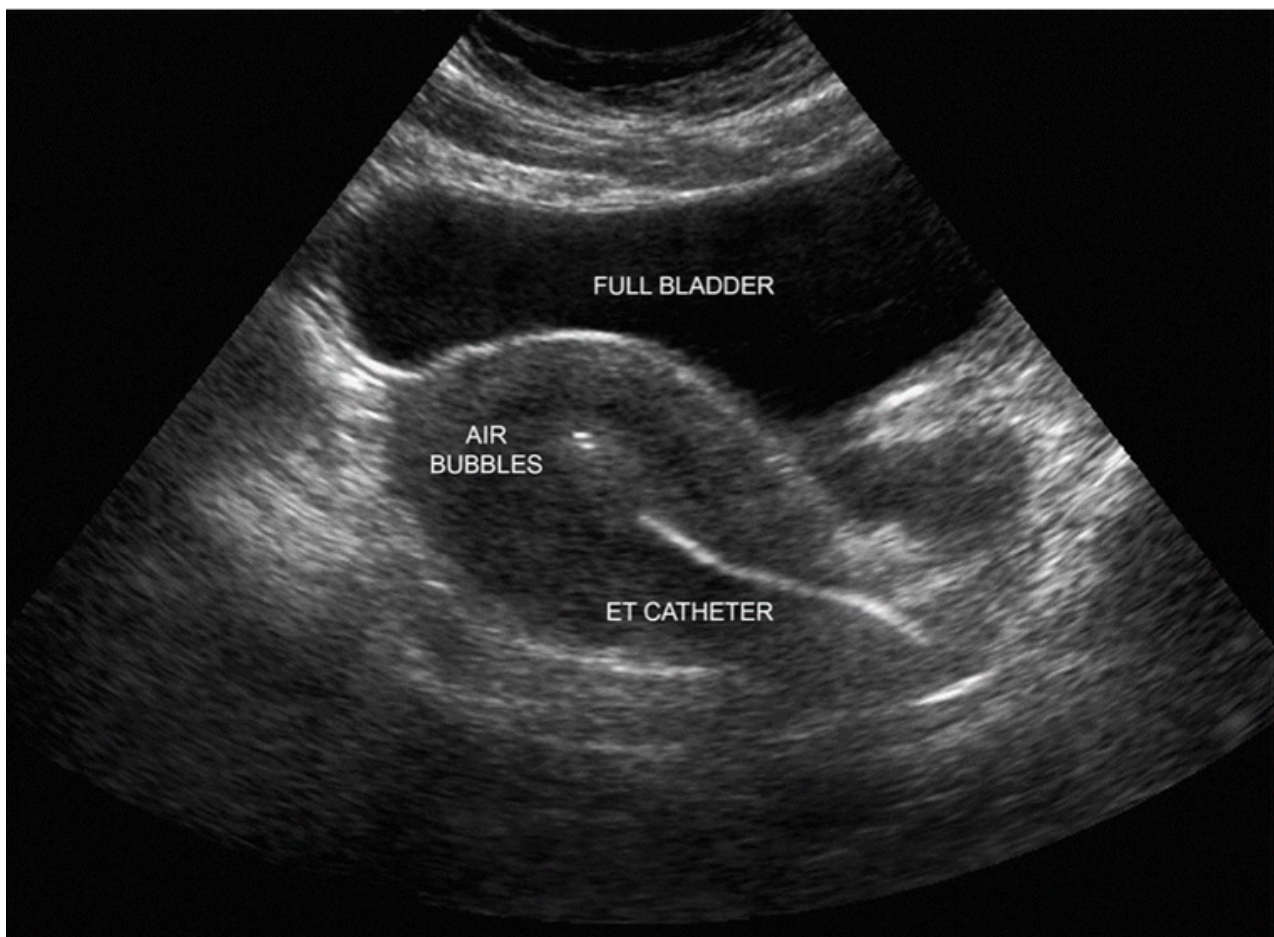
Deciding How Many to Transfer

- This will be discussed with your doctor and fertility team on the day of embryo transfer when we know the number and quality of your embryo/s.
- The ideal number to transfer is one, known as a single embryo transfer (SET), but in some very limited situations we will recommend two, double embryo transfer (DET).
- The optimal outcome is for an embryo transfer to result in one pregnancy.
- Multiple pregnancy (e.g., twins) is associated with increased clinical and non-clinical risks. Please refer to the patient information leaflet “Number of Embryos to Transfer During IVF/ICSI”, which was sent to you through the patient portal.



Embryo Transfer

- If there is a fair quality embryo on the day of transfer an embryo transfer procedure will take place.
- This involves placing one embryo(s) in the woman's uterus (womb), where they will hopefully implant and lead to a pregnancy.
- Medication or sedation is not typically required for this procedure.
- Embryo transfer is performed by placing a speculum in the woman's vagina (similar to the procedure for taking a smear test) and then gently passing a very fine tube (catheter) containing the embryo into the uterus, generally under transabdominal ultrasound control.
- Embryo transfer takes place late morning/early afternoon.
- The embryologist will advise you of the date and time.



Instructions for Embryo Transfer

- If you are taking vaginal progesterone, you will be advised not to administer it on the morning of embryo transfer.
- Please observe cleanroom guidelines and do not wear strong scented deodorant/perfume/aftershave, make-up, nail polish or jewellery. These guidelines are also applicable to your partner if they are attending.
- Your partner (if applicable) must be available either to attend the embryo transfer or to take a phone call. They must be available to discuss the quality and number of embryos to transfer.
- You do not need to fast. Please continue to eat and drink as you normally would.
- Please do not empty your bladder for approximately 2 hours prior to the scheduled time of transfer. A full bladder assists in positioning the catheter in the uterus.
- Please allow for up to 1 hour at the Clinic.
- It is very important to continue your progesterone support until advised to stop by nursing team.

After Embryo Transfer

- Following embryo transfer, the nurse will provide guidance of what to do up to the day of your pregnancy test.
- You will be advised to follow a pregnancy-friendly diet and continue to avoid smoking and drinking alcohol.
- It is very important to continue your progesterone support at this time.
- The two weeks between embryo transfer and pregnancy test are often described as the most stressful time. Please continue to take care of yourself and avoid any additional stress in your life.



After Treatment

Pregnancy testing

- Pregnancy testing is done by HCG blood test.
- You will be provided with a date to attend for this.
- Unfortunately, a bleed may occur prior to your testing day. Progesterone support will not always stop/prevent a bleed. If this happens, please contact our nursing team for guidance and support.

Your pregnancy test is negative

- When the test is negative, there can be a deep sense of loss. Emotional support is invaluable at this stage.
- You will be offered a review appointment with the doctor as part of your treatment cycle.
- Prior to this appointment, your case will be discussed in detail by our multidisciplinary team of doctors, nurses and embryologists.
- A member of our team will contact you and advise you of the future plan and answer any questions you may have.

Your pregnancy test is positive

- An early pregnancy scan will be arranged for approximately 3 weeks later (around 7-8 weeks of pregnancy).
- You can cease your progesterone support unless you have been specifically advised otherwise.
- Remember to continue your pregnancy-friendly lifestyle and continue to take folic acid and vitamin D.
- We will ask you to inform us which maternity hospital and obstetrician you plan to attend for your pregnancy care. A letter will be sent from your doctor at Merrion Fertility Clinic to your GP and to your obstetrician in the hospital you choose.

What to Expect During Your Fetal Heart Scan:

- The nurse will discuss the findings of the scan with you and provide guidance on medication, pregnancy-friendly diet, antenatal care, and more.
- You can request a copy of the scan report and images if you wish.
- Sometimes, staff may seek a second opinion before confirming the findings.

Freezing Embryos

If a couple have extra good quality embryos that are not being transferred in the fresh cycle, these are frozen so that they can be used in the future

- Embryos are usually frozen on Day 5 or 6 after egg collection
- The number of embryos to be frozen will be discussed with you at embryo transfer.
- Once in storage, the clinic will contact you once a year to discuss your intentions for them. Therefore, it is very important to ensure you contact the clinic if your contact details change.



Using frozen embryos

- If pregnancy doesn't follow the fresh transfer cycle the patient/couple can come back to try again with their frozen embryos.
- A cycle of treatment using frozen embryos (FET cycle) is much easier than a fresh cycle because the embryos are already created.

Frozen Embryo Transfer Cycles

Booking a FET Cycle after a Fresh Cycle

- If your previous cycle was unsuccessful and you have frozen embryos in storage a protocol for a frozen embryo transfer (FET) will be discussed by the Merrion Fertility Clinic multidisciplinary team.
- Afterwards, you will be contacted by a member of the clinical team to discuss next steps.

Cancelled/Failed Cycle

Even though treatments and approaches are carefully tailored for individual situations and patients, unfortunately sometimes the IVF treatment cycle does not proceed as planned. Some of the more common reasons for cycle cancellation or failure are outlined in this section.

When a treatment cycle is cancelled, your case will be discussed at the review meeting which is a multi-disciplinary meeting attended by senior members of the Clinical, Nursing and Embryology team. A revised protocol for your next treatment cycle will be decided on and, afterwards, you will be called by a member of the Nursing team to discuss dates for your next cycle.

Ovarian cysts

- Approximately 5% of patients will develop simple ovarian cysts either naturally or as a result of medication. These cysts can produce oestrogen, and may interfere with the progress of your IVF cycle.
- Cysts generally resolve either spontaneously, with the help of an oral contraceptive pill or by staying on downregulation medication for an additional week. If the cyst fails to resolve, a minor procedure may be required to drain it.
- Some cycles may need to be cancelled and rescheduled if significant cysts are found

Ovarian hyperstimulation syndrome (OHSS)

- Some patients, particularly those with polycystic ovaries, may over-respond to the chosen dose of stimulation and are at risk of a serious condition called OHSS or ovarian hyperstimulation syndrome.
- In OHSS, the ovaries swell and very high levels of oestrogen and other chemicals are released, affecting the integrity of the woman's small blood vessels.

In severe cases, the following may occur:

- affected women feel unwell and nauseous
- ovarian swelling and fluid leaking from the blood vessels causes abdominal discomfort and pain
- The kidneys may fail to work efficiently
- Fluid can collect around the lungs and around the heart
- The condition subsides as the ovaries return to normal size, but it will be made worse if pregnancy occurs.
- Where there is concern that OHSS may develop, it is best to give agonist trigger instead the usual hCG trigger and not to proceed with embryo transfer. Any embryos that have developed are frozen and a frozen embryo transfer is performed at a later date when the woman has recovered fully.

Ovarian Accessibility

Every egg collection carries a risk that one or both ovaries may not be safely accessible. Ovarian accessibility can be affected by variations in pelvic anatomy due to natural biological differences, pelvic conditions (such as fibroids, adhesions from previous surgery, endometriosis, or obesity), or ovarian response during hormonal stimulation, which may make transvaginal access difficult.

When the ovaries are difficult to access, several techniques can be used to improve accessibility. However, if the ovaries remain non-accessible, the egg collection will not proceed, as this would be unsafe. If only one ovary can be accessed, unilateral oocyte retrieval is recommended, as patients still have a reasonable chance of success.

Cancelled/Failed Cycle

Freeze All

There are certain circumstances in which the fresh embryo transfer may not occur, and the embryos are instead frozen.

Examples of this include:

- When vaginal bleeding is noted around the time of intended embryo transfer
- Progesterone levels are too high.
- Where the ultrasound scan suggests the endometrial lining is not optimal
- When the woman has developed a medical problem (e.g. flu)
- Rarely, embryo transfer may be unexpectedly difficult. It may be necessary to abandon it, freeze the embryo, treat the difficulty, and then perform embryo transfer in next cycle.

Failed/inadequate stimulation

- Even though the dose of stimulation drugs used is specifically tailored to each woman based on her age and ovarian reserve, some women respond poorly.
- In approximately 5% of cycles, treatment will be cancelled prior to egg collection because of poor response, i.e. only one or two follicles develop, or a low number in someone expected to produce more

Failed or abnormal fertilisation

- In some patients, there will be total failure of fertilisation or only abnormal fertilisation, resulting in no healthy embryos. If this happens, then the treatment cycle is over. This happens in 2–5% of cycles. It is often unexpected, as up to this point the egg development and the sperm quality will have seemed okay.
- The results are generally good if ICSI is used on the next occasion.

Nothing to transfer

- Embryo development may be abnormal or slow and some embryos will not be suitable to transfer or to freeze.

Early Pregnancy Miscarriage

The stages of early pregnancy can be a stressful time for expecting parents and Merrion Fertility Clinic endeavors to support our patients throughout this time. Unfortunately, early pregnancy miscarriage is a common occurrence affecting 1 in 5 pregnancies. Diagnosing a miscarriage in the very early stages of pregnancy is difficult. An ultrasound scan can sometimes show features that indicate a possible miscarriage, but at the very early stages it cannot confirm this with certainty. To ensure accuracy, a follow-up scan is required 7-10 days (about 1 and a half weeks) after the first scan. This scan will be completed in the Early Pregnancy Assessment Unit (EPAU) at The National Maternity Hospital. We appreciate that the uncertainty and waiting period required for this additional scan can cause significant stress and anxiety. However, this approach aims to provide the most accurate diagnosis and the best possible care.

Suspected Miscarriage:

- As described earlier, due to the nature of early pregnancy, a second scan appointment will be scheduled at least 7 days after the initial scan in the Early Pregnancy Assessment Unit (EPAU) in The National Maternity Hospital. While this can be very distressing, please understand that it's a crucial step that needs to be taken to ensure the accuracy of the findings.
- A copy of your fetal heart scan will be sent to the hospital for your follow-up scan appointment.
- If you experience any new or worsening symptoms while you are waiting for this appointment, please contact Merrion Fertility Clinic during opening hours or present to the emergency department at NMH.
- While they strive to provide prompt care, there may be a wait to see a midwife or doctor, depending on the current activity in the Emergency Department. We understand that this can be distressing, particularly during such a difficult time. Please rest assured that our team will make every effort to see you as soon as possible and provide the care and support you need.

Due to early gestation, sometimes it may not be possible to confirm whether your pregnancy is going to continue or not. This could be due to one of the following:

- It is possible that we have not seen a fetus and fetal heartbeat because you are too early in the pregnancy. A repeat scan in 7 to 10 days should clarify whether the pregnancy is healthy or not.
- It is also possible that the pregnancy is not growing as it should, and the bleeding may be a sign of an impending miscarriage. Similarly, a repeat scan will clarify the situation.
- There is also the possibility that the pregnancy is outside the womb. This is unlikely, but we cannot exclude it at this stage as it is too early to diagnose. If we suspect that this may be the case, we may suggest doing a blood test called β HCG (human chorionic gonadotrophin). It is a hormone produced by the placental tissue and its levels roughly double every two days in a normally growing early pregnancy. We may also repeat the scan in a few days.

Suspected Miscarriage (continued):

- If a miscarriage is suspected on the day of your fetal heart scan, the clinic will organise another scan in the EPAU at the hospital. Our staff will accompany you for this appointment to ensure a seamless transition of care between our staff and the hospital team. We want to assure you that you'll be well taken care of for this appointment as they specialise in these types of scans and have a dedicated team there to assist you. Please be advised that the hospital will then take over the management of your care. This might include multiple scans and/or a series of blood tests.
- The nurses will let the clinic doctor know about your follow-up ultrasound appointment at the hospital.
- The clinic will follow up with the hospital after your second scan appointment to ensure continuity of care.
- Please continue your medications until a final diagnosis is made by the hospital.
- Once the scan findings are in line with the gestational age, a letter will be sent to your referring doctor and chosen Obstetrician for antenatal care.
- Depending on individual circumstances, this process may vary slightly, but rest assured, we are committed to providing you with the best possible care.