fertility solutions

with an affordable edge

ABOUT YOUR FERTILITY TREATMENTS

INFORMATION FOR PATIENTS

What Is In Your Booklet?

Embarking on Fertility Treatment can be a daunting prospect. Access to good information can help you make sense of what is going on and help you to be active participants in your care. This pack contains information about what is likely to happen during your treatment, who we all are, how to contact us and a lot of other relevant information.

We strongly recommend that you read the information in your pack thoroughly and keep it in a safe place so you can come back to it at a later stage.

A Special Request

Eggs, Sperm and Embryos are extremely sensitive to the environment around them. We try really hard to maintain the best environment for successful embryo development and would appreciate your help with this. Any time you visit the office for long periods of time (1/2 hour or more), we request that you do not wear any perfumes or after shave, lotion or any strongly scented moisturizers.

We would also appreciate if you don't smoke in or around the building. Even if the smell of cigarette smoke on your clothes may be enough to affect the air quality in our laboratory. We are confident that pregnancy rates are not impacted on, if the exposure time is minimal. This is an area that we can control, so to give you the best possible chance – we suggest you avoid these things.

So Please, No:

- **PERFUMES**
- **AFTER SHAVE OR**
- **OTHER FRAGRANCES AND**
- **NO SMOKING**

Thank You

The Fertility Solutions Team

CONTENTS

Collection, Use And Disclosure Of Personal Information

Fertility Solutions Sunshine Coast and Fertility Solutions Bundaberg ('Fertility Solutions') respects the privacy of its clients. Fertility Solutions is bound by the National Privacy Principles under the Privacy Act 1988 (Cth) in its handling of your personal information. It is important for you to be able to trust and share with us all the information necessary to provide you with the best possible care. Fertility Solutions is committed to the highest standards of professionalism in the delivery of all our services, including in relation to privacy of an individual.

1. Where Will We Collect Information From?

The main source of our collection of your personal information is the information provided to us directly by you, in our consultations and in completion of relevant forms and any referral, or other, letters from health practitioners. In some circumstances we may need to collect personal information about you from another person (for example a family member). We will ordinarily ask for your consent to speak with another person about you, however, if there is an emergency we may not have the opportunity to obtain your consent.

We will also collect personal information about you during the course of your treatment. In addition to recording your treatment and progress at Fertility Solutions, we will also collect personal information as a result of reports prepared by other companies, such as reports related to specimen analysis and radiology reports.

Where there is no express consent from you for collection of your personal information, collection may still occur in limited circumstances, such as for research purposes, or as required by law or the National Health and Medical Research Council: Ethical Guidelines on the use of assisted reproductive technology in clinical practice and research 2007, as set out in our privacy policy.

2. How Will We Use Your Personal Information?

Your personal information will be used for the purpose of management of your health care and health needs in relation to your fertility treatment and for directly related purposes (such as sharing of information amongst your health practitioners or specimens being sent for analysis). If not directly related, Fertility Solutions will obtain your express consent for disclosure and/or, where reasonable and practicable in the circumstances, will endeavour to use personal information in a de-identified form. Use and disclosure will occur in other limited circumstances as set out in Fertility Solutions' Privacy Policy ('the Policy'), (such as for confidential review by auditors to demonstrate that the practice complies with the National Reproductive Technology Accreditation Committee Code of Practice or submitting a summary (de- identified) of every treatment cycle performed to the Australia and New Zealand Assisted Reproduction Database).

You should also be aware that Fertility Solutions is authorised to disclose limited genetic information obtained in the course of providing a health service to you, where we reasonably believe that use or disclosure is necessary to lessen or prevent a serious threat to the life, health or safety of your genetic relative (but not an unborn child) and the recipient of the genetic information is your genetic relative. Reasonable steps must be taken by Fertility Solutions to obtain your consent for this use or disclosure.

Your health information may also be disclosed to a person responsible for you in certain limited circumstances, for example, if you are no longer capable of giving or communicating consent to the disclosure.

Fertility Solutions will take all reasonable steps to ensure the accuracy and security of your information. Fertility Solutions retains records for at least a period of 25 years from the date of the last treatment or the date of birth of the last child born as a result of the treatment, whichever is the later. Electronic records are stored indefinitely.

3. Right To Access And Amend Personal Information

You have the right to access your personal information (except in rare circumstances as set out in the Privacy Policy, in which case reasons for denial of access will be given) and to request amendments where you believe there are inaccuracies in the personal information held by Fertility Solutions.

If you would like to access your personal information please contact the Unit Manager at the applicable facility on (07) 5478 2482 (Sunshine Coast) or (Bundaberg).

Arrangements will be made for you to access your information, which may involve the information being provided to you by your fertility doctor or another doctor who can explain the information contained in your records. You will be advised in advance of the likely fees involved in providing a copy of the material before the request is processed.

Patient Rights And Responsibilities

Everyone who is seeking or receiving care in the Australian health system has certain rights regarding the nature of that care. These are described in the Australian Charter of Healthcare Rights. The rights included in the Charter relate to access, safety, respect, communication, participation, privacy and comment.

The Australian Charter of Healthcare Rights is available to everyone in the healthcare system. It allows patients, consumers, families, carers and providers to share an understanding of the rights of people receiving health care.

Patients, consumers, healthcare providers and health service organisations all have an important part to play in achieving healthcare rights and con- tributing to a safe and high quality healthcare system.

A genuine partnership between patients, consumers and healthcare providers is important so that everyone achieves the best possible outcomes.

Healthcare providers are aware that in some circumstances, your ability to interact with the healthcare system may be restricted. Where possible they will alert family or support services about your circumstances if they consider that you need assistance.

A useful link is www.oho.qld.gov.au

Reporting On Fertility Treatments

The National Perinatal Statistics Unit (NPSU) publishes national reports on reproductive and perinatal health which cover pregnancy outcomes, maternal morbidity and mortality, assisted reproduction and congenital anomalies. This is available for inspection in the public domain at www.npsu.unsw.edu.au

The NPSU report documents details of fertility treatment cycles conducted across Australia and New Zealand including success rates for each type of treatment in a de-identified way. Fertility Solutions is required to provide this data to the NPSU. As this information is important to government

agencies including Medicare, which funds many cycles it is important that everyone assists in maintaining this database.

1. Patient Confidentiality

Any information that you provide to the clinic or our staff is strictly confidential. There are some situations however where we are required to share information with others, e.g.

- Communicating with your referring doctor
- Communicating with others involved in your care e.g. counsellor, gynaecologist
- Providing Medicare and your private health fund with information to assist you in claiming any benefits
- Communicating with the hospital where you will be having procedures performed
- Any pathology or radiology laboratory where you are asked to have tests, so they're are aware of what is required
- It is an ongoing requirement of our license as an IVF Unit that we submit de-identified data to ANZARD regarding our success rates
- We regularly undergo an accreditation process with Global Mark (an accredited certifier), who review patient notes. All inspectors are bound by confidentiality agreements.
- Within the clinic, patient notes are regularly audited to ensure that all of the standards that are expected within the Unit are being met, thus staff other than those involved in your care will have access to your notes.

If you have any concerns about the privacy of your information, we are happy to discuss these with you further.

Translation Services

If you require translation services please notify us so that we can contact Ethnolink. For more information about their services please refer to their website: https://www.ethnolink.com.au/

Interpreting Services

If you require translation services please notify us so that we can contact the Institute of Modern Languages at the University of Queensland. For more information about their services please refer to their website: https://iml.uq.edu.au/interpreting

Welcome And Thank You For Choosing Fertility Solutions

We are honoured that you have chosen us to come on this journey with you. We would like to explain a little more about whom we are and how everything works.

Our Philosophy

We aim to put our patients first at all times. We do this by striving to maintain high ongoing pregnancy rates, by providing patients with excellent sources of information about infertility diagnosis and treatment options, by our personalized approach and by structuring our fees in a way that minimizes any unnecessary expense to patients.

Our Clinics

Fertility Solutions Sunshine Coast (FSSC) was established in January 2007, and relocated to its current location at Buderim in April 2013. Fertility Solutions Bundaberg (FSB) was established in late 2007 and currently has its home at 89 Woongarra St, West Bundaberg. We are equipped to provide most Advanced Reproductive Technology (ART) services, including semen preparation for insemination, IVF, ICSI and cryopreservation of semen, eggs and embryos. Any services that we do not provide locally we will attempt to coordinate for you if possible.

Fertility Solutions has been accredited yearly by ISC certifiers under the direction of the Fertility Society of Australia.

Your Team

Fertility Solutions is made up of a team of very dedicated nurses, doctors, scientists, receptionists and counsellors who are here to work with you through your journey. For more information on your team including photos and contact details please refer to our website. In order to minimise the risk of a misunderstanding occurring the team at Fertility Solutions has spoken with some of our patients and put together what can be reasonably expected of both parties.

Practice Mission, History And Philosophy Our Vision

Delivering excellence in fertility solutions whilst providing affordable options.

Our Mission Statement

To offer the most advanced, innovative and best practice fertility treatments to all patients at one centre and to provide services and care at the highest quality to exceed patient needs

Our Values

- **Empathy:** be thoughtful towards the feelings and experiences of others and provide support and encouragement to all.
- **Respect:** treat all persons we encounter in our day whether they are individuals, couples, visitors or co-workers with kindness and dignity.
- **Commitment:** strive to provide exceptional and personalised care with professionalism and dedication, while making certain we act as a team that accepts personal accountability.
- **Quality:** demonstrate our ability to satisfy our patients' and staff needs and exceed their expectations, while continuously striving to improve our models of care.
- **Communication:** provide honest, open and collaborative communication in a respectful and confidential manner at all times

Each of the philosophies shares equal importance and have a high level of interdependence. They apply across the organization: however, the managers take a leading role in embracing and demonstrating the collective philosophies, supporting the company's wider leadership team in meeting the principles set by these viewpoints.

Patient Charter

Fertility Solutions is acutely aware that patients have a right to certain expectations when dealing with their health care providers. Equally important are health care providers' expectations about the patients they are providing a service to. Fertility Solutions encourages a patient/couple to be an active participant in the treatment process rather than a passive recipient. The staff at Fertility Solutions believes that there are things patients (& their partner's) can do to increase their treatment efficiency and minimize emotional suffering from the fertility journey.

1. Approaches Infertility As A Couple's Issue

The fact that one spouse may be identified as having "a problem" does not negate the effect it has on both people in the relationship. The fertility workup, evaluation, and treatment is much better dealt with when the partner participates in at least some necessary visits and has an understanding of the tests they must go through. The more involved a couple is together in the overall process not just the treatment, the better able they are to support each other and make a decision on options.

2. Communicates Openly, Directly With Their Doctor, Nurse & Other Fertility Treatment Team

This begins by abandoning the concept of doctor but rather thinking of this person as a person with special skills. Communications can then flow more naturally and are less intimidating. The members of the fertility team expect that the patient honestly communicates their needs openly at all times. Being dishonest, or not letting the team know about something that is important makes it hard for us to deliver you the best possible care.

3. Asks Questions About Treatment Investigations, Plans And Ongoing Management

Direct questions about the shortcomings, possibilities of things not going to plan, and alternative tests and therapies which might include:

- What are the advantages of this test?
- Why does this test need to be timed in this manner?
- Can this test cause any pain, discomfort or complications?
- Are there complications from this particular test or treatment?
- What are the benefits of this treatment over others?

The patient has a duty to ensure that answers to these questions, or anything else they do not fully understand, should be very clear before undergoing tests or treatments. Then, having this understanding and knowledge, the patient/couple can more confidently follow relevant instructions.

Openly informs the doctor, nurse or team member (directly) when he or she is not meeting their expectations

It seems that one of the hardest things for patients to communicate to a doctor or fertility team member is when they are unhappy with the way they are being treated or the experience they have had. For example, perhaps one of the office staff responded curtly or the doctor sounded demeaning. The hurt or embarrassment from such incidences can go deep and ultimately affect the

team/patient relationship. However, the team member cannot be held accountable without first being made aware of the patient's feelings and then being given the opportunity to respond.

As in any relationship, both the positive and negative issues that occur between all members of the fertility team and patient need to be discussed and not avoided. Fertility Solutions strongly encourages individuals/couples to share their experiences both positive and those that can be improved upon.

4. Seeks Education On The Medical And Emotional Aspects Of Fertility Treatment

This includes reading the literature that is provided for them by the clinic at various aspects of treatment and to ask if there is something that they do not understand. Traditionally, patients undergoing fertility treatments are often the most medically well-versed of all patients. However, they may overlook information about the feelings brought on by their infertility and should both seek or accept offers to attend to the emotional aspects of their fertility journey.

5. Finds Ways To Reduce The Stress Caused By Infertility

Patients need to understand that infertility is stressful, which is normal, expected, and not permanent. However, to deal with the stress, support mechanisms are needed. Guidance and understanding can be found through support groups (like the ones offered by your local group), subscribing to the Australian National Fertility Support Network - ACCESS, or by seeing a counsellor/psychologist whose specialty is infertility counselling. Hobbies, vacations, social interaction, and exercise can help make the problems less overwhelming. Infertility can be an isolating experience unless patients find other people with whom to share these feelings.

The team will do what we can to help individual's/couples to cope, however, it is not practical to expect your nurse or doctor to be able to provide you with ALL the support that you need and you will be encouraged and provided with resources so that you can seek supports outside of the clinic.

6. Works With The Fertility Team To Ensure The Best Possible Outcome

This means following instructions that have been given by a member of the fertility team such as having tests and phoning the clinic for results when requested. It is also important to collect ongoing instructions and medications when asked. If unsure of any instructions received, contact is made with a care provider to clarify these concerns or issues. This also has the benefit of providing some control over the journey and what happens during the process. We request that patients notify the clinic as early as possible if they are running late for an appointment or having to cancel.

7. Realises When Infertility Treatment "Burn-Out" Is Being Experienced Seeks Help

This may come out in unresolved marital conflict, sexual problems, or feelings of apprehension, anxiousness, or depression. The couple might consider finding ways in their sexual relationship to separate work (trying to get pregnant on schedule) from play (love making). Or they may want to think about taking a holiday from temperature charts, tests, and medications to alleviate some of the stress.

8. When Enough is Enough – Deciding To End Treatment:

You as an individual/couple are best placed to decide whether you should continue with treatment, and by having an open and honest discussion with you nurse /doctor/counsellor about the probability of success when treatments have not been successful so far can aid in making this decision. We request that you let the clinic know when you have reached the point where you do not wish to pursue further treatment cycles.

If you as one of our patients would like to see other areas added, please email us at enquiries@fssc.com.au and we would be happy to consider your suggestion(s).

Feedback

We want to know whether we are meeting your expectations for care during your time with us. From time to time we ask current and past patients to complete satisfaction questionnaires so that we can assess how we are doing in this regard. Of course, we are more than happy for you to let us know in writing at any time how you think we are doing.

Your Nursing Team

Please be assured we have a very experienced team of nurses providing support, so no matter who you see when you visit, they will be aware of your situation and be able to work with you.

The nursing team set aside specific times each day so that you can call them and they will be available to talk with you and answer any questions you may have. If you would like to speak with a nurse, please call the Buderim clinic on 5478 2482 between 8.00 & 9.00am or 3.00 & 4.00pm or the Bundaberg clinic on 4151 5222.

You can also email the nurse assistant directly on nurseassistant@fssc.com.au if this is more convenient and a nurse will return your email within 24 hours of receiving it. If the matter is urgent please contact the clinic directly by phone or your doctor.

Contacting the Clinic

Fertility Solutions is open for routine appointments Monday to Friday (excluding Public Holidays) from 8:00am-4:00pm.

Weekday Business Hours Contact:

- Clinic Contact Number: 1300 Fertility (337 845).
- Patient phone in times (for non-urgent talk to a nurse): 8:00am-9:00pm and 3:00pm-4:00pm.

Phone:

Sunshine Coast (07) 5478 2482

Bundaberg (07) 4151 5222

On really busy days you might get an answering machine. Please don't be put off by this. Leave a message and a contact phone number and your call will be returned as soon as a staff member is free. You will receive a call back the same day.

Fax: Sunshine Coast (07) 5478 2489

Bundaberg (07) 4152 9777

Post: **Sunshine Coast:** Nucleus Medical Suites,

Building B, Suite 22, 23 Elsa Wilson Drive, Buderim 4556

Bundaberg: 89 Woongarra Street, West Bundaberg, Qld 4670

General Email:

enquiries@fssc.com.au

Weekday After Hours Contact:

- Please phone your Specialist (who will have a message on their answering machine as to how to contact them).
    - Dr James Orford Ph: 5441 5700
    - Dr George Bogiatzis Ph: 5444 6400
    - Dr Kirsten Morrow Ph: 5476 1666
    - Dr Nerida Flannery Ph: 5452 5415
    - Dr Kelvin Larwood Ph: 5478 4470
    - Dr Harrie Swanepoel Ph: 4331 1545

After Hours/Emergency Contacts

- If the matter is of urgent concern present to your nearest emergency department or call 000 and request an ambulance.
- There may be times when you really need to speak to a member of the team out of office hours, on a weekend or on a public holiday for matters that cannot wait until the next business day. We have an on-call roster so that there is always someone available to take your call.
- For any after-hours queries please ring (07) 5478 2482. The answering machine will have a recorded message as to who to contact.
- The person on call might be a specialist or nurse that hasn't been involved in your care so you might need to fill them in on some details.
- If your query can wait until the next working day we would encourage you wait and call the office then.

Weekend On-Call Nurse Contact:

- **NO TEXT MESSAGING AVAILABLE**
- Patients can contact a nurse on call: 0437 624 770
- For Blood Results: please call between 4:00pm-5:00pm

Email Contact:

- Patients can email the nurse assistant: nurseassistant@fssc.com.au
- Email is only checked Monday to Friday (excluding Public Holidays) from 8:00am-4:00pm.
- Please CC the nurse assistant in to any email replies to a nurse (as your nurse may not be working that day).

Concerns Or Issues – What To Do?

At Fertility Solutions we take seriously any complaints or concerns raised by our patients and staff. The purpose of the Fertility Solutions Complaints Management program is to ensure that, as part of its Quality System, all complaints are viewed as a valuable quality tool and represent an opportunity for quality improvement.

A patient feedback form outlining the complaints handling system is available in the reception/waiting areas at all Fertility Solutions business sites (Buderim and Bundaberg) and you can also download this brochure from our website (www.fssc.com.au).

You can email any concerns directly to HR@fssc.com.au

Important Legal Information

Whilst our staff are happy to answer your questions, we are not in a position to deal with questions of a legal nature e.g. the rights of any children conceived using donated eggs, sperm or embryos. We recommend that you seek independent legal advice about any issues relating to your IVF treatment. In addition, we strongly recommend that you seek legal advice regarding your will, specifically in relation to the disposal of any stored eggs, sperm or embryos in the event of your death.

A Summary Of The Really Important Parts

- Before you can commence your first treatment cycle there are some test requirements that must be completed, and some that we strongly recommend. Your specialist or nurse will explain this in more detail. The results can take up to six weeks and results must be reported before treatment commences.
- All consent forms must be signed by all the involved parties before treatment can commence. Discuss this with your doctor and nurse if you need to clarify anything. You can request a copy of all consent forms for you to keep, just ask us.
- Payment for treatment will be dependent upon your treatment type. Please ask our accounts staff about your options.
- We need you to ring us on day 1 of your cycle (that's the day your period starts), or it may be the next working day if it falls on a weekend/PH. Please refer to your cycle instructions. You will be given further instructions about any further tests, appointments, ultrasound scans or so on that you will need.
- We will provide you with a "Cycle Instruction Sheet" to carry with you. This is a summary of your treatment and will provide you written instructions about what medicines you will be on, when to take them, your dose, when to have blood tests, visits with the clinic, call for test results and so on. Please read this and check with us if you are unclear. It is really important for your chances of success that you follow these instructions precisely. **It is vital that you bring it with you to all of your visits at the clinic or with your specialist during your treatment.**
- Please let us know if you are having any side effects related to your treatment, or any unusual symptoms at any stage during your treatment.
- While it is not common, pregnancies can occur in couples about to embark on fertility treatment. In order to avoid any possible exposure of the fetus to potentially harmful IVF drugs we ask that you use a barrier method of contraception for the cycle prior to your cycle. It is also

recommended that unprotected sex be avoided when you are having treatment until your doctor or a nurse advises otherwise.

- While it is hard work emotionally, we strongly recommend that you wait for 16 days after you have ovulated or after your embryo transfer before you do a pregnancy test. Sometimes the hormone treatments that we use will produce a falsely positive result if you test prior to this.
- Emotional support is available to you both, either as a couple or individually at any time prior to, during or after your cycle. Speak with a nurse or specialist, or our experienced counsellors. There are also support groups available, if you would find talking to other people with similar problems helpful.

Fee Information

Please refer to the Fee Information Sheets provided to you at your first interview for more detailed information on Fertility Solutions Fees.

Fees for Fertility Treatment can be complex. Fertility Solutions Admin will provide you with an individualized quote and run through any additional information relating to costs. The precise cost of treatment depends on a lot of outside factors (i.e. Private Health Fund, Medicare Rebates/Safety Net etc.). All quotes are valid for 1 month. If there has been a gap between receiving your quote and starting treatment, please follow up with Admin to ensure there have not been any changes.

We try to keep our information as accurate as possible however, we are unable to take responsibility for the accuracy of any additional outside charges.

1. Fertility Solutions Cycle Fee

Covers the cost of your appointments with the Nurses, your blood tests and scans, and the laboratory procedures associated with your cycle. There are additional fees for some medications, in-clinic procedures, specific laboratory procedures, and ongoing storage fees for any Sperm, Eggs or Embryos frozen.

2. Specialist Fees

Will be charged for any consultations with your Specialist before or after your cycle. Some patients having specific Fertility Treatment will receive additional invoices from their Specialist. If your Specialist has not yet given you a quote for this, please contact their office directly.

3. Hospital Fees

Will be associated if your Egg Collection or Surgical Sperm Collection is taking place in Hospital. If you have Private Health Insurance, please check with your provider (prior to treatment) if you will be covered. Item Number for Egg Collection: **13212.** Item Number for Surgical Sperm Collection: **37605**. If you have an excess on your policy, you will need to pay this amount on or prior to admission. If you do not have Private Health Insurance, you will need to pay the full amount prior to your procedure. For Sunshine Coast patients, please call the Buderim Private Hospital on **(07) 5430 3303** to obtain a quote. For Bundaberg patients, please call the Friendly Society Hospital on **(07) 4331 1000** to obtain a quote.

4. Anaesthetist Fees

Will be associated if your Egg Collection or Surgical Sperm Collection is taking place in Hospital. If you have Private Health Insurance, please check with your provider (prior to treatment) if you will be covered. For Sunshine Coast patients, please call the Sunshine Coast Anaesthetic Group on **(07) 5493**

4383 to obtain a quote. For Bundaberg patients, please call the Coral Coast Anaesthesia on **(07) 4154 3367** to obtain a quote.

5. Cancellation Fees

If your cycle is cancelled, there may be a charge for your care, depending on stage of cancellation. This charge will vary depending on the individual treatment schedule. Please refer to your quote for further information regarding this or call Sunshine Coast Accounts on **(07) 5478 2482** or Bundaberg Accounts on **(07) 4151 5222** for further clarification.

6. Medicare

Before you start treatment, please ensure that you are registered with Medicare in order to receive any Medicare Rebates/Safety Net. Please call **132 011** for any enquiries.

7. GP Visits/Other Tests During Treatment

The fees that Fertility Solutions charge for a cycle are called "Global Fees" by Medicare. These are designed to cover all sorts of expenses during your cycle. If you see a Doctor or have other medical expenses during your cycle (i.e. blood tests etc.), then Medicare will assume this is part of your cycle and will **NOT** rebate you for this. Try to avoid seeing your GP for non-urgent reasons during treatment. If you do, remind them that you are in a cycle. This way, they can mark your account "not related to current fertility treatment" and you receive your Medicare rebates.

Please don't hesitate to call Sunshine Coast Accounts on (07) 5478 2482 or Bundaberg Accounts on (07) 4151 5222 for any further clarification.

Where Do We Start?

Patients come to access our clinic generally in one or two ways. Firstly, they have seen a gynaecologist who has recommended fertility treatment. Secondly, patients can approach the clinic directly if they feel uncertain as to what the next step is. Before commencing treatment we require that patients have seen one of our Specialist doctors, and a Fertility Nurse. We want to make sure that whatever treatment is chosen really is your best option, and that you are fully aware of the benefits and the downsides to using fertility treatments as your pathway to parenthood.

Tests Prior To Commencing Treatment

Prior to commencing treatment with Fertility Solutions (FS) you will be asked to have some routine tests performed. Some of these will need to be repeated every two years. Please note that by having these tests this is not a 100% guarantee that these viruses/infections are not present in the person being tested.

The Tests Are As Follows:

• Semen Analysis (+/- Sperm Antibody Test)

This is a comprehensive fertility assessment of the male semen. This investigation includes sperm antibody testing and must be performed by the laboratory at the clinic prior to a couple commencing treatment. All new patients and patients who have previously had treatment with FS and are returning after a greater than 1 year break must have a semen analysis performed by a FS Scientist.

The only exception to this is when a semen analysis and sperm antibody testing has been performed within the last 12 months in a recognized fertility unit where the results were normal (copy of results must be available for FS to file).

• Hepatitis B: Hepatitis C: HIV 1 & 2: And Syphilis, Chlamydia and Gonorrhea (Mandatory For Both Partners)

The above blood tests are performed in order to attempt to minimise the chance of these viral infections being passed on from mother to fetus. Everyone accessing treatment with FS must have these tests performed.

• Blood Group And Rubella Screening (Mandatory)

All female patients are required to have a blood group and Rubella screening test. Testing for the Rubella virus (German Measles) helps determine if the patient has immunity to the virus which can be very harmful to the fetus during pregnancy. If not immune a booster injection is recommended. If after the first booster immunity is still not achieved another booster may be recommended. There should be at least 28 days following the booster before pregnancy occurs. IUI or IVF procedures should not be commenced until results of the booster has been reviewed.

• Chromosome Analysis (Mandatory For Both Partners)

This test checks to see if a person has the normal amount of chromosomes present (46) and in the right order. The test will usually detect the more common chromosome problems that often result in

infertility or early miscarriages. The test does not however test for potential genetic disorders and it does not guarantee that any resulting embryos will be chromosomally or genetically normal.

• Cystic Fibrosis (Highly Recommended)

This test is recommended for all patients. Cystic Fibrosis is a genetic disorder than can be passed on from parents to their children. It affects the respiratory, digestive and reproductive systems. There is currently no cure for this condition. For a baby to be born with Cystic Fibrosis, it has to have 2 abnormal genes, 1 from each parent. If both parents carry the abnormal gene for Cystic Fibrosis, whilst they will be normal, there is a 1 in 4 chance that they will have a baby with Cystic Fibrosis. 1 in 25 people carry the abnormal Cystic Fibrosis gene and 1 in 2,500 babies are born with the condition.

If there is no known family history of Cystic Fibrosis then the option for the screening test is a 9 mutation test where the most common cystic fibrosis mutations are tested for. There is an out of pocket cost to the patient. Performed at QML Pathology.

If there is a known family history of Cystic Fibrosis or if one partner shows a positive test, a more comprehensive test will be performed which tests for 33 mutations, with an approximate out of pocket cost to the patient. Performed at QML Pathology.

If a test shows that both parties have tested negative for these mutations this reduces the chance of them having a child with Cystic Fibrosis, however it does not eliminate the chance. There are thousands of less common mutations and it is impossible to test for them all.

• Female Hormone Assessment (Blood Test)

These blood tests assess the functioning of the ovaries and can assist your doctor determine how much medication may be needed in your treatment. These are Follicle Stimulating Hormone (FSH), Luteinising Hormone (LH), Oestradiol (E2) and Anti Mullerian Hormone (AMH).

• Baseline Vaginal Ultrasound Scan And Antral Follicle Count (Female Only)

This test is for women who have not had a pelvic ultrasound assessment within the past 12 months. The scan is used to assess the pelvis, uterus and ovaries for any obvious conditions that may impact upon fertility. This scan is also used to assess the distance from the cervix to the fundus of the uterus. This later information is very useful when embarking upon an embryo transfer procedure. Test to be performed between day 5-10 of your cycle.

- **Tubal X-Ray Test** (for patient wanting Intra uterine insemination) known as a hysterosalpingogram (HSG) or Hysterosalpingo-Contrast-Sonography (HyCoSY).

  This test is only relevant for women considering having intra uterine insemination treatments and is not needed if having IVF.

If you have any questions regarding these tests please do not hesitate to ask your Nurse or Doctor

THE RESULTS OF ALL THESE TESTS MUST BE AVAILABLE BEFORE ANY TREATMENT CAN COMMENCE. PLEASE NOTE THAT SOME OF THESE TESTS CAN TAKE UP TO 5 WEEKS BEFORE RESULTS ARE AVAILABLE.

Releasing Your Test Results To Other People

It is Fertility Solutions Policy in relation to the provision of results to patients that the following be adhered to:

- Only results relating to the person requesting will be released unless consent to release results to another party has been completed.
- The results will only be released once the person has been identified by requesting verbally for them to provide their full name and date of birth which must be checked against the patient's clinical records.
- In the event that a result is outside the normal limits then the patients' GP or Fertility Specialist will be contacted requesting that they follow up the patient.
- Semen analysis results must be obtained through your GP or specialist and will be available 3 working days after the procedure.

Preparing Yourself For Treatment

1. Nutrition

A healthy balanced diet is vitally important to maximizing a couple's fertility, and improving their chances of a healthy pregnancy with a healthy baby. Take a good look at your diet. If you don't know what to do to improve it we can recommend a dietician with an interest in fertility issues who can work with you.

It has been proven that using folate (folic acid) prior to and during the first 3 months of pregnancy can reduce the risk of a particular fetal abnormality called a Neural Tube Defect. Other supplements have also been shown to reduce the risk of a number of other fetal abnormalities. We encourage all women to take Elevit (a mineral and vitamin supplement specifically designed for conception, pregnancy and breast feeding) during their treatment, and if successful continue it during their pregnancy.

For the male using vitamin and mineral supplements such as Menevit suggests that there is certainly no great disadvantages to using a good quality general multivitamin and mineral supplement for men and in fact can be advantageous.

2. Weight

There is very strong evidence that being either underweight or overweight impacts on the chances of IVF treatment being successful (and on the chance of pregnancy without treatment). In addition, once pregnant there are extra risks to the baby if a woman is underweight or overweight. We strongly advise all women (and the men also need to set a good example here!) to get to and stay at a healthy weight before, during and after successful treatment.

There is no magic pill that will make you shed the weight. Good old fashioned exercise and attention to a good quality diet are the keys to success. There are many paths to weight control - think about what you think will suit your personality type. You might find the support of a group like Weight Watchers helps you, or prefer the individualized help of a dietician or personal trainer.

Don’t make any excuses – wanting to have a baby IS your excuse to get your weight under control for good!

3. Exercise

No surprises here either! We all know we need to do this, don’t we? Daily exercise, at least 30 minutes at a time, assists in weight control, fitness and general health. It doesn’t really matter what form of exercise you do, so long as it works for you.

It is possible to overdo it though. More than an hour of hard exercise each day is probably excessive. The week prior to and following your egg pick up and embryo transfer you should plan to take it easier, as you can find you are a little sore.

4. Relations

Many couples overcoming infertility find that the place of sex in their relationship becomes different to what it was for them in the past. Instead of being a purely pleasurable activity, it becomes a chore that has to be completed at the right time in order to achieve the goal of pregnancy. Embarking on fertility treatment can either make this situation better (so it goes back to being just something you do for fun) or much worse (you don’t need to have sex to get pregnant with fertility treatment so why bother at all!).

Sex is part of the glue that cements relationships together so it is important not to ignore this aspect of your life during your treatment. Our counsellors’ from the Sunshine Coast and Bundaberg are available if you need help getting the sexual side of your relationship back on track.

There are some times during your treatment when we don’t want you to have sex though, and times when we might ask you to use contraception. Your specialist and nurse will advise you on this in more detail.

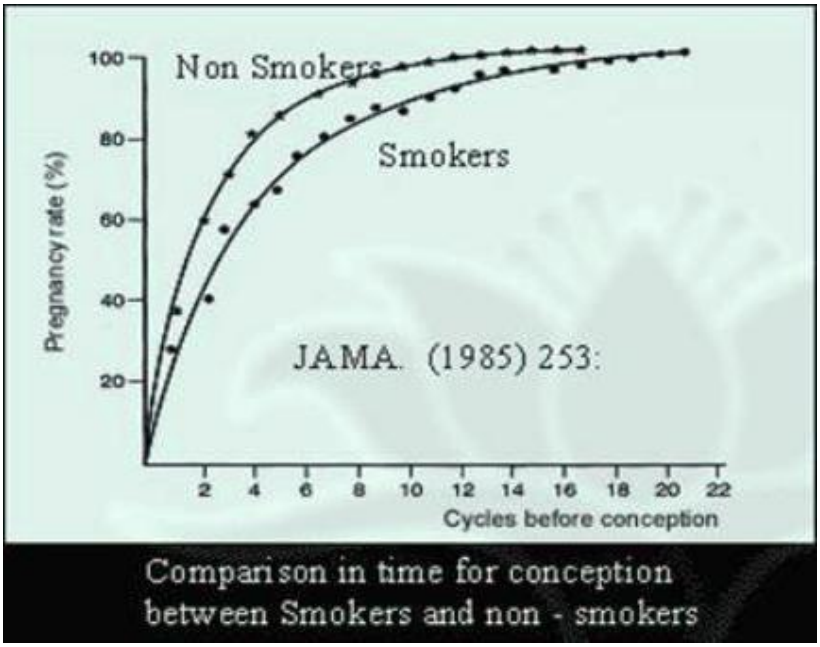
It is possible (and we’ve seen it happen) for couples to become pregnant on their own during their IVF treatment. It’s not really a good idea though, as we don’t have a lot of data on the possible effects of the drugs we use on the developing fetus. We therefore recommend that you use condoms in the month prior to commencing your treatment cycle. Sometimes we will ask you to use the contraceptive pill to ensure that your period starts on the right day. Obviously if this is the case then there’s no need to use condoms as well. We will do a pregnancy test before you start any injections.

5. Smoking

It’s bad for you OK! Wanting to have a baby is the perfect excuse for you to finally kick the habit. Why? Smoking reduces the chances that you will get pregnant even with fertility treatment. It increases the chances that you will miscarry, or experience serious pregnancy complications such as placenta praevia, bleeding, cerebral palsy and still birth. Not to mention increasing the chance that you won’t be around to see this child reach adulthood. There is no safe level of smoking other than none. Even passive smoking is a risk. This goes for the men just as much as the women.

Talk to your GP. Ring the Quitline. Do whatever it takes. Patches, gum or Zyban or NicoBlock really do help many people to kick the habit.

Picture 1: Time to fall pregnant between Smokers and Non-Smokers



6. Marijuana

Is also a bad idea for the same reasons. In addition, there is in increased risk of abnormalities in the children born to parents (either women OR men) who smoked marijuana around the time of conception. Your IVF Nurse has further information available about the effects of marijuana use on fertility; please ask for one if this is relevant to you.

7. Alcohol

There's a debate at present about whether there is a safe level of alcohol intake during pregnancy. Obviously we know that not drinking any alcohol is safe. Binge drinking at any stage in your treatment or pregnancy is a complete no no, and this includes men too! Regular heavy alcohol consumption (more than 2 standard drinks a day for women, or 4 a day for men) can also interfere with drug treatments during your cycle. It is best to stop all alcohol consumption from the time of your embryo transfer until you do your pregnancy test. If you are pregnant, stay alcohol free until you have had the chance to discuss it further with your own obstetrician.

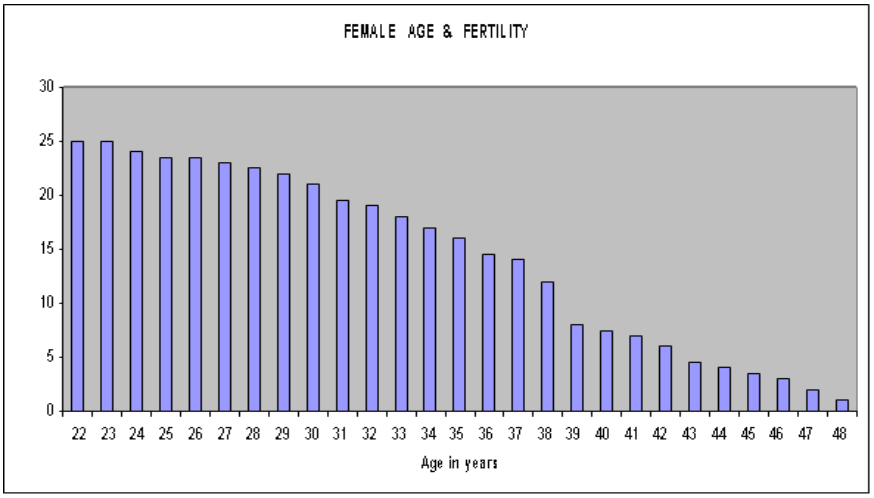
8. General Health

The healthier you both are going into treatment, the better the chances of success. Prior to starting treatment get a general health assessment with your GP (yes men too!) and check your blood pressure, get a diabetes test and so on. If you have a long term health problem, see whoever your main carer is and make sure you are as good as you possibly can be before you start treatment.

9. Female Age

The age of the woman is the SINGLE strongest determinant of success in fertility treatments (and in fertility in general). Yes we know it isn't fair, and there's nothing you can do about it. But it is a reason to bite the bullet and get on with treatment. Waiting for a year or two is not going to help.

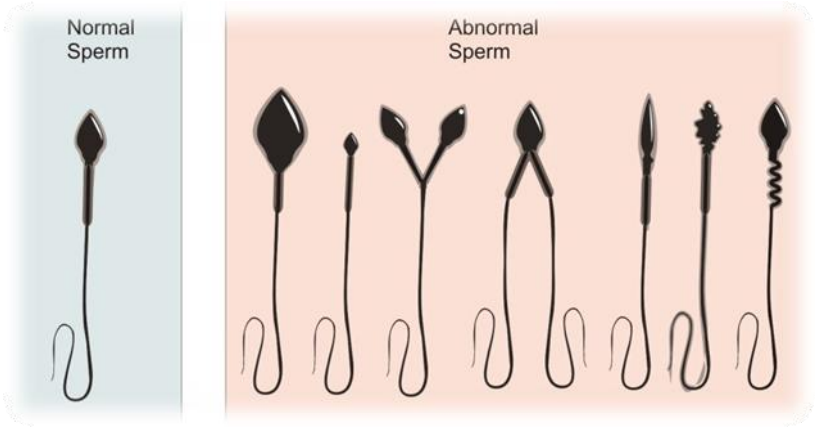
Picture 2: Per Month Chance of Conception Compared with Female Age



For the Men: Producing a Sample

Recent research has suggested that men should be ejaculating 2-3 times a week for at least 2-3 months prior to treatment. The more frequent ejaculation (2-3 times/week) occurs the less likely there is damage to the sperm because it has been stored in the testes for too long. In addition there is emerging research that men can benefit from a male multivitamin, in particular Menevit which has been clinical proven to have a positive effect on sperm function and quality.

Picture 3: Normal and Abnormal Sperm



On the day of the insemination or your partner's egg collection you will be asked to deliver a fresh sample of semen (collected by masturbation) to a scientist at the Fertility Solutions clinic at a prearranged time. The sample should be produced no earlier than 1 – 1 ½ hours prior to the time you are required to take it to the clinic for processing.

Do not leave your sample with anyone other than a Fertility Solutions staff member.

You may choose to produce your sample at home or in a dedicated room at Fertility Solutions.

If you anticipate that the semen collection will be difficult for you, please discuss this with us and we can organize alternative arrangements.

1. Multivitamins For Men

There is now a multivitamin specifically trialled and tested for men. Menevit is an antioxidant formulation designed to boost sperm health. It is the only male preconception supplement available in Australia which has been tested in a double blinded, randomized, controlled trial. The results were published in the Australian and New Zealand Journal of Obstetrics and Gynaecology with a summary of the trial outcomes as follows:

- There was a significantly higher pregnancy success rate in patients taking Menevit (38.5% viable pregnancies) compared with those who had received a placebo (16% viable pregnancies).

So come on men, there is now something that you can do to assist in having a healthy pregnancy and baby.

(Tremellen, K., et. al., A randomized control trial examining the effect of an antioxidant (Menevit) on pregnancy out- come during IVF-ICSI treatment. Aust NZ J Obstet Gynaecol 2007; 47(3):216-221).

Counselling And Support

It is important for those experiencing infertility to be able to access counselling when they need to. Our clinics are supported by Fertility Counsellors and registered Psychologists who are members of the Australian and New Zealand Infertility Counselling Association (ANZICA).

The empathy and objectivity of a fertility counsellor can be helpful. The role as fertility counsellor is to help people deal with the stress and emotions involved in trying to achieve a pregnancy or in dealing with other fertility issues. This may include providing support with relationship difficulties and helping couples or individuals explore better ways of dealing with anxiety or stress, work through the complexities of treatment decisions, debrief and share experiences, and explore family building alternatives. Don't wait until you are in crisis to seek help. Try to use counselling as a resource, not a last resort!

Your first contact with a counsellor will be around the time you commence your first treatment and will be by phone. In this initial brief contact the counsellor hopes to get to know you a little better, therefore making it easier for you to approach them at any time should you wish. This service is incorporated in the global fee and is free to you. After this initial chat, the counsellor will be more than happy to help in any way they can at any stage of the treatment cycle, or afterwards, whether you have conceived or not.

You are encouraged to contact the counsellor in your area directly if you feel you need support. You will be provided with contact information when you commence treatment with us.

At present, we offer one fully funded session of counselling which is included in the global fee for all patients undergoing IVF. This covers a session during a fully stimulated IVF cycle and extends up to one month after completion of that cycle. Additional sessions may be partially covered by private health insurance or new Medicare items for psychological services depending on your eligibility. In order to receive a Medicare rebate for psychological services, you will need to discuss your eligibility with your G.P. and request a referral.

1. Managing The Stress Of Infertility

Infertility can be a major life crisis involving a massive readjustment. Not being able to have a child when you want one is extraordinarily difficult. Your dream of starting a family now includes a number of health professionals, your health fund, and an assortment of invasive tests and medications! Feelings of shock, depression, guilt, anger, frustration, envy, anxiety, isolation and loss of control are all common reactions and the power of these emotions generally comes as a surprise. Let's face it; we spend most of our adult lives taking precautions to prevent pregnancy. Being confronted with infertility when we are finally ready to start a family can be a huge blow.

Unfortunately, our society often fails to recognize how extensive the adjustment to infertility can be, affecting as it does privacy, attitudes, expectations, lifestyle, goals, finances, relationships, support networks, work and one's body. Given this, infertility is often not understood or even shared with others and normal support systems may not be accessed. Some women may feel uncomfortable around children and consequently start to isolate themselves from family and friends who have children. Increasing isolation can leave the couple without social support networks to overcome feelings of sadness and frustration. Therefore, we encourage you to share the information in this booklet with a small support team. This will help them understand what it is you may be going through so that they can best support you during this tough time.

A level of stress and anxiety is almost inevitable in IVF and some individuals will experience chronic stress. Research has shown that women undergoing treatment for infertility have a similar level of stress to women who are dealing with life-threatening illnesses such as cancer or heart disease. Studies have found that of 200 pre-treatment couples 49% of women and 15% of men found infertility "the most up- setting experience of their lives" as compared with other serious losses such as death or divorce.

Whilst at this time there is no convincing research evidence that stress affects the outcome of treatment, there is plenty of evidence that infertility is stressful. Such intense stress can certainly become an obstacle to effective living and the reduction of stress is important for you and your relationships. The good news is that even though at times it may feel like you can't cope, most people do cope.

Some important points to remember are:

- You are not going mad! If you have days when you are not coping, it doesn't mean you are going crazy; it is just that at the moment the stress has become too much.
- You don't have to be in control of yourself and your emotions all the time, rather when you need to be.
- You can cry when you like.
- Your worth as a person is not dependent on your ability to conceive a baby. Ideas that might help
- Don't worry about being stressed. Stress in a normal response to infertility. The first step in reducing stress may be to stop feeling panicky about feeling rotten!
- Talk to other people and build a support network. Even the most insensitive person can usually be educated about the impact of infertility and can be taught by you how to be helpful and supportive. Whilst you may only feel happy talking to your partner, you may need more than that. In handling any feelings of grief, the essential component to therapy involves talking about your feelings, thoughts and actions. Again and again, not just once. Holding it all in and trying to

cope without the help of anyone else usually doesn't work. It creates a pressure cooker and sooner or later the lid explodes.

- Tell your partner how you want to be helped. Partners are mere humans, incapable of mind reading. If you need to pass up the family gathering with five nieces and nephews under two, then say so. If you want to be hugged, massaged, left alone or listened to without any response, you'll more likely get what you want if you ask.
- Get out! A change of scenery can do wonders. Go for a walk, watch a movie, or have a cup of tea with friends. It matters less what you do than that you do something – away from your home.
- Exercise daily. Anything that gets you up and about will improve your state of mind. Yoga, tai chi or relaxation classes can help you focus, relax and overcome stress.
- Inform yourself. Becoming informed about infertility and treatment options helps people to feel that they are in control of the situation. There is no crystal ball, but you can reduce some of your uncertainty by collecting information.
- Allow yourself to cry. It is appropriate to express your emotions so don't try to shut off your feelings.
- Don't blame yourself for what you have or haven't done in the past. You did or didn't take the pill, you did wait to start having children, you did have an earlier abortion. What has happened has happened. There is no point in living in the past or the future. Live for today.
- Focus on things you can control. Take control of what you can and leave the rest up to science. Get back to the things you used to do before infertility such as sport, hobbies and interests, relaxation, and recreation.
- Don't let infertility run your life. It is important that you don't put life on hold and live in limbo. This may be difficult to do, but it is one of the most important things you can do for yourself and your partner. Have some fun and pursue other activities. Sometimes this might mean taking a break from treatment, other times it may mean going on that holiday, starting that study program or changing jobs.

2. You And Your Partner

Infertility can put a great strain on even the best relationship. Issues of communication and gender differences with coping and feelings of guilt and blame may have an impact. Couples find themselves planning their lives around treatment cycles and having sex by prescription only. Sex for procreation only can be mechanical and not very satisfying and hence, infertility can impact on your sexual relationship.

Men and women often cope differently too and it can be counterproductive to expect your partner to cope in the same way you do. Just because he isn't thinking about this constantly and crying easily doesn't mean that he doesn't care. Many men feel that they must be strong and in control to best support their partner. As for her, just because she is crying at the drop of a hat and is being remarkably irritable doesn't mean that she blames you, doesn't love you anymore, or is going 'nuts'. Recognising and accepting these differences can be helpful. Try to see your different styles of coping as complementary rather than adversarial. Combine the best of both traits – the stereotypically sensitive, understanding female and the logical, problem-solving male – to strengthen your relationship.

Some helpful tips are:

- Be there and let your loved one know that you are there when they need you. Sometimes 'being' will be more valuable than 'doing'.

- Listen. The most valuable gift you can give is your attention. It is natural to want to say something comforting but at times there will be nothing you can say to make your loved one feel better, so try to refrain from giving advice. Listening and trying to understand how they are feeling and acknowledging those feelings can be very supportive and sometimes all that is needed at the time.
- Try not to judge. Sometimes your loved one may do or say some things that you think are irrational. At times their feelings about their infertility may defy your understanding, so try not to judge.

To protect your relationship, it can be useful to remind each other that infertility won't last forever. This is a chapter in your lives and either you will become pregnant, or you will choose an alternative path. Make time for things you enjoy doing as a couple, express your love for each other and work together to support each other through this difficult time.

Sharing some of the difficulties with a trained and experienced counsellor can be the first step to finding a way to resolve some of these issues. Incidentally, there is no evidence that the incidence of separation or divorce is higher for couples undergoing fertility treatment and many couples find that the whole experience brings them closer than ever before. Successfully coping with infertility can result in many couples feeling confident that they can tackle any future problems together.

3. Managing Expectations

Fertility treatment is not a single hurdle, but rather a series of hurdles where each has to be completed before proceeding to the next. This can make it a tiring process full of highs and lows that many describe as a "roller coaster" ride of emotions. The first part of the cycle tends to commence with optimism and hope and after a big build up and a lot of medical attention, embryos are transferred and then there is a long and anxious wait. If there is no pregnancy, many experience an emotional crash.

Waiting for results is often the most difficult part of the process and this can be a time of sensitivity and vulnerability. Feelings of excitement and optimism may be tempered by the possibility of impending bad news.

The coping response that seems to work best for most people during treatment is one of realistic optimism. You will want to be optimistic enough to have the energy you need for pursuing treatment, but not so optimistic that you find yourself emotionally devastated if treatment isn't successful this cycle.

(And if you all found that helpful - just wait until you get to meet our counsellors in person!)

4. Patient Support And Social Groups

Be reassured, there are others out there that have been through this before and have survived. Once you are further down the track you might feel that sharing your own experiences of the fertility journey could help others (or just yourself even). There are a number of support groups available within Australia and locally.

If you prefer the anonymity of the Internet - there are any number of message boards and chat rooms dedicated to fertility treatment. Many of these attract people from all around the world. Bear in mind that some of the drugs and treatment options available overseas are not available in Queensland (or vice versa).

Fertility Solutions has an IVF Support Group Facebook Page (search Fertility Solutions IVF Support Group).

This is a private, confidential online support group for people who are patients of Fertility Solutions Sunshine Coast and Bundaberg clinics. The team understand that there are many ups and downs when embarking upon fertility treatments and as such can be an emotional roller coaster for many.

We hope that this closed page will encourage you to share your thoughts, feelings and experiences with others who are not only going through the same processes as you but are attending the same clinic - making further contact and ongoing supportive friendships possible because you know the people you are communicating with live nearby not in another country or state.

All members of this group are patients of Fertility Solutions Sunshine Coast or Bundaberg clinics.

It's important to know it is a Closed Group - so no-one external to the group can see any posts or what is discussed within the group. Your friends will see that you have joined the group, but nothing beyond that.

ACCESS (www.access.org.au) is the largest Australian based support group for all types of infertility issues including IVF treatment. They have excellent information on their website and can arrange contacts between people undergoing treatment for mutual support.

5. Fertility Solutions Counsellors

It is important for those experiencing infertility to be able to access counselling when they need to. We have counsellors available based on the Sunshine Coast and Bundaberg. Please speak with your clinic nurse if you would like us arrange a referral. Your initial consultation with the counsellor is free of charge.

Causes of Infertility

Medically speaking, a couple is said to be infertile when they have had regular unprotected sex for 12 months without achieving a pregnancy. Up to 15% of all couples fit this definition. The aim of investigating infertile couples is to identify potentially treatable causes of infertility (diagnosis), and to identify their chances of achieving a pregnancy without further assistance (prognosis).

While infertility is classified into causes affecting women and causes affecting men, the reality is that there is often a bit of both that compounds the situation. Almost 50% of the time no clear reason is found at all (which is called unexplained infertility).

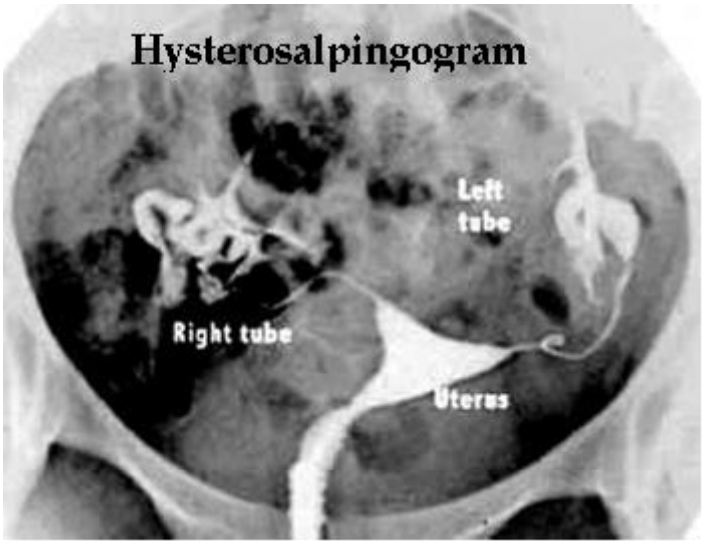
The common causes are:

- Ovulation (Egg production) disorders - causing complete absence of or reduced production of eggs e.g. Polycystic Ovary Syndrome, premature menopause.
- Tubal disorders - blockage or absence of one or both Fallopian tubes e.g. pelvic infection, scarring from surgery.
- Abnormal Semen test - low or no sperm, inactive sperm, abnormal appearing sperm or any combination of these.
- Other factors such as age, genetic disorders and endometriosis can also have an impact on the chance of pregnancy.

1. Making A Diagnosis

Sometimes the cause of a couples infertility is so obvious that no testing is needed (e.g. the man has had a vasectomy), but for most couples it isn't that clear cut. The tests that are carried out include -

- Testing for egg production - this might involve keeping a record of your menstrual cycle, hormone testing and ultrasound scans, depending on the individual situation.
- Testing the Fallopian tubes for blockage - which can be done either using an X-ray called a hysterosalpingogram (or HSG) or HyCOSY or surgery called a laparoscopy.



- A semen analysis - this needs to be repeated at FS to be sure of the severity of the problem.

Once a problem has been identified (although this is not always possible), more tests may be required to determine the precise cause and whether it will respond to treatment. Sometimes no problem at all will be identified. This is called Unexplained Infertility.

Treatment Options

Depending on the cause(s) of infertility there can be other treatments that might also be successful. Disorders of egg production can be treated with a variety of medicines to bring on ovulation. Surgery might be an option for some forms of Fallopian tube problems. Mild abnormalities of the semen can be treated with insemination. If you aren't clear about what treatment is the best option for you at this present point in time, discuss your specific situation with a Nurse or your Specialist.

Before embarking on any treatment, we would like you to feel that you know enough about your own situation and the options available to you, and to agree that this really is the best option for you at the present time. We are happy to explore other treatment options with you if this is what you prefer.

Intra Uterine Insemination (IUI)

IUI can be used as a treatment for many causes of infertility, provided you can produce an egg, a reasonable quality semen test and there is at least one fallopian tube working. However, depending on the cause(s) of infertility there can be other treatments that might also be successful. Disorders of egg production can be treated with a variety of medicines to bring on ovulation. Surgery might be an option for some forms of Fallopian tube problems. More severe abnormalities of semen, or

blocked tubes are best treated with IVF. If you aren't clear about why IUI is the best option for you at this present point in time, discuss your specific situation with your specialist or nurse.

IUI has the advantage of lower costs than most other forms of treatment. It is less intrusive than IVF. The disadvantages compared with IVF include the lower success rate and a possibly higher risk of multiple pregnancy.

Before embarking on an IUI cycle we would like you to feel that you know enough about your own situation and the options available to you, and to agree that this really is the best option for you at the present time. We are happy to explore other treatment options with you if this is what you prefer.

IUI stands for Intra Uterine Insemination - which literally means that sperm are placed inside the uterus. Insemination was beginning to be used as early as 1780 in the animal world. The technique has been refined and the success rates of treatment have increased greatly since the early days. IUI is still undergoing a process of evolution to try to maximize pregnancy rates, minimize the risks and make it as easy as possible for couples.

The basic steps:

In order to achieve a pregnancy, we need you to produce up to 2 eggs, and a reasonable quality semen sample. In some couples they don't need any extra help with this. We may give medications to stimulate the ovary to produce eggs if there is a problem with this. Sometimes we might also give you an ovulation blocking medicine in order to stop the premature release (ovulation) of the eggs so that we can be sure that you have your insemination performed when you are most likely to be fertile.

We will need to monitor you to see how you are responding during the cycle to give you the best chance of a successful outcome.

Semen collection is done by masturbation, and the sample dropped into the laboratory on the day of the planned insemination. After the insemination we might ask you to take additional hormone treatments to help support a developing embryo.

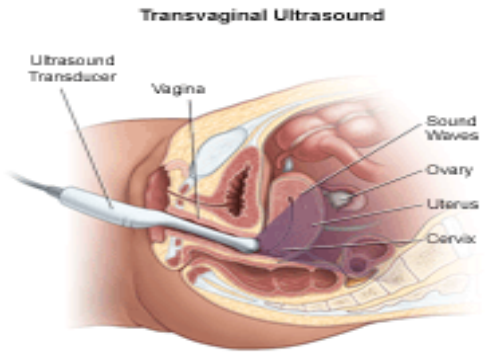
1. Stimulation

If you have no trouble with egg production (ovulation) then we might not need to use any medications. The most commonly used medicine for stimulation purposes is Clomiphene Citrate (Clomid), or Femara (Letrozole) which gently stimulates the ovary to produce an egg, or sometimes more than one egg.

Occasionally Clomiphene/Letrozle is not able to bring on ovulation. We will discuss your choices with you if this is the case. These choices include - ovarian drilling surgery, metformin therapy, or FSH injections. Women with polycystic ovary syndrome who don't respond to Clomiphene often will benefit from ovarian drilling surgery. This is a laparoscopic procedure that involves making a small cut in the navel and inserting a telescope so that the internal organs including the ovaries can be seen. Other small cuts are made to insert additional instruments and a number of small holes are made in the surface of the ovary using an electric current (diathermy). This can result in women being able to ovulate on their own, or at least make them respond better to Clomiphene. If this is of relevance to you please discuss this treatment option with your specialist.

Also for women with polycystic ovary syndrome, metformin can be used in addition to Clomiphene to help the Clomiphene to work more effectively. Metformin tablets are more commonly used in treating diabetes.

If neither of these is appropriate or they haven't worked then stimulation of the ovary can be carried out using a low daily dose of follicle stimulating hormone (FSH) given as an injection. This is the same hormone used in IVF, but is used in a much lower dose so that only one or 2 follicles develop.

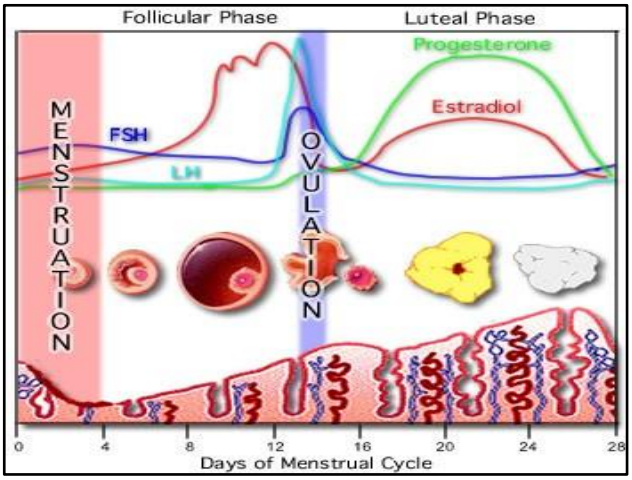


2. Monitoring

Each woman's cycle is different each month, whether we are using medicines to stimulate the cycle or not. Hence it is important for us to monitor how you are responding.

For stimulated cycles we use a combination of blood tests and ultrasound scans for your monitoring. The blood tests are looking at your oestradiol level, which is produced by the ovary and the hormone LH which tells us when you are about to ovulated. Overall this gives us some idea about what is happening in terms of egg production.

The ultrasound scans are done as transvaginal procedures. This permits us to get fairly close to the ovary so we can see what is going on. What we are looking for are the black collections of fluid in the ovary called follicles. Generally each follicle will be home to one egg, never more. We can count how many there are, and measure how big they are. Once the follicle is at least 17 mm in size the eggs are generally ready for ovulation. You may need a number of blood tests, some before you start treatment, some during, and then if you are successful, there will be more to monitor your pregnancy progress. We generally use QML Pathology for our blood tests, as we have an agreement with them to "fast track" our patients' hormone results.



For any blood tests that you are required to have done DURING your treatment cycle we require that you have them done at QML no later than 8am on the day requested.

To make your blood tests easier to cope with we suggest the following –

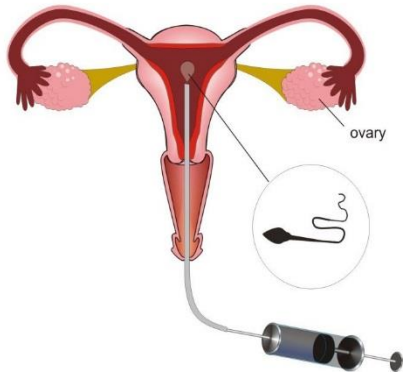
- Make sure you are not dehydrated. Drink 2 or 3 large glasses of water before you leave home to have your tests done.
- Keep your arms warm as this makes the blood vessels much easier to find.
- If you are prone to fainting during blood tests, let the blood collector (they are called phlebotomists not vampires by the way!) know in advance so they can collect your blood with you lying down not sitting up.
- If you have major issues with needle phobia, let your Nurse know as soon as possible. Counselling can help resolve a lot of this fear. Using EMLA to numb the area can also be useful. You can buy EMLA cream or patches from the chemist without a prescription. Check

with your nurse where to use it, and apply it at least one hour before you will be having your blood test done so it is working.

As a consequence of your monitoring (blood tests and scans) we might recommend that you -

- not make any changes at all to the original plan,
- increase or decrease the number of days before your insemination,
- cancel your cycle and stop your treatment completely. This will happen if you have more than 2 mature follicles on scan before your insemination.

Controlled Ovarian Hyperstimulation (COH)
Intra-Uterine Insemination (IUI)



3. Trigger Shot

Once your ultrasound confirms the presence of a mature follicle or two, you may be required to start daily blood tests or we will give you an injection so that we know exactly when your most fertile time will be. The brand name of this injection is Ovidrel. This is called a "trigger" shot. At Fertility Solutions we plan to do the insemination on the same day as the blood hormone surge or trigger injection and at the very latest the following day.

4. Semen Preparation

If you are using your partners' sperm for the insemination then we will require the sample to the laboratory about a 1 ½ before the scheduled time for your insemination. Our scientists will then assess the quality of the sample and compare it with any previous samples.

Any sperm that are not moving vigorously are washed out of the sample, along with some chemicals normally found in semen that can cause strong cramping in the uterus. The remaining sperm are concentrated into a very small volume of culture medium ready to be used for the insemination. This process takes around 2 hours.

5. Insemination Procedure

Inserting the prepared sperm sample into your uterus is a relatively straight forward procedure that will happen in the clinic. In fact it is very similar to having a pap smear. A speculum is placed in the vagina so that the cervix (neck of the womb) can be seen. A thin tube is passed through the cervix into the lower part of the uterus and the sample is injected into the uterus. The speculum is then removed. You are then free to get dressed and go.

Inseminations are performed by one of our nurses. After the procedure you may find that some of the sample leaks back out again- THIS IS NORMAL and happens to everyone and doesn't affect your chances of success. We supply you with a panty liner to wear to make the after-procedure time more comfortable.

6. Possible Problems With The Insemination Procedure:

It can sometimes be difficult inserting the insemination catheter through the cervix into the uterus. This is more common in women who have never been pregnant before.

Sometimes there will still be difficulty getting the catheter through your cervix and we then try repositioning the speculum and may try using a more rigid catheter. Even though we have washed many of the chemicals out of the semen sample that can cause cramping, this can sometimes occur. It generally passes quickly. A hot pack applied to the area can help. You can also take Panadol if it is

more serious, but we ask you not to take any other pain relievers unless you have spoken to us about them first.

Very rarely the process of insemination can push germs from the vagina into the uterus and cause an infection. If this happens you would develop some or all of the following - an offensive vaginal discharge, worsening pain, fevers, general feelings of being unwell, and sometimes spotting. If you think that this is happening please contact the clinic as soon as possible so we can start you on treatment.

After Your Insemination

7. Luteal Phase Hormonal Support

In a normal period cycle the time between ovulation and the next period (or not if you are pregnant) is called the luteal phase. This is a time when the body makes large amounts of progesterone hormone. Progesterone prepares the uterine lining for the embryo and supports the early development of the embryo after implantation. Without adequate progesterone the lining of the uterus can start to breakdown early.

If you have used your own natural cycle or Clomiphene then generally your body does a pretty good job of this. Sometimes we will recommend that we give you extra hormone support during this time to improve your chance of pregnancy.

Progesterone can also be given as a vaginal gel called Crinone or in a pessary form - like a bullet shaped tablet called Oripro that goes in the vagina. The progesterone is absorbed very well through the walls of the vagina. It can't be taken as an oral tablet as stomach acid destroys the hormone. Whichever one of these you use it can get a bit messy by the end of your cycle, and you will find it more comfortable with a panty liner.

If we have started you on luteal phase hormonal support then you need to keep taking it until you have spoken to the nursing staff on the day of your pregnancy test. If you have a positive test you may be asked to continue hormone support. Your doctor will decide when to decrease and then stop this.

8. What To Do After Your Insemination

The basic principle is to get on with your life, without overdoing anything. You certainly don't need to spend 2 weeks in bed with your legs up the wall! Heavy physical work or extremes of temperatures (like a sauna) are not a good idea. Basically you should behave like you would during a pregnancy in terms of alcohol intake, diet and any medications you might use. Intercourse is encouraged after the insemination procedure and can continue as normal.

Do watch out for any unusual pain, bloating, vomiting or bleeding at this stage. If anything unusual is happening we want you to let us know what is going on.

9. Pregnancy Testing

Sixteen days after ovulation we want you to do a pregnancy test. To make things easier we supply you with a urinary pregnancy test. Follow the instructions in the pack. If you are on luteal phase hormonal support they can stop you from having a period even if you aren't pregnant so please don't assume that no period means that you are pregnant. Likewise you can get some bleeding around period time and still have a successful pregnancy.

Once you have tested please ring the clinic and let your Nurse know the outcome. You will be given further instructions about what to do next.

10. The Dreaded Two Week Wait….

The time between your insemination day and your pregnancy test sometimes feels like the longest time in the world, with wild swings in your emotions. This can be in part due to the effects of any hormones you are on which can give you really strong premenstrual symptoms. Being warned in advance that it might be like this for you can help. Plan to take it easy during this time, as you aren't going to manage big stressful situations as well as you normally would. Plan some pampering time for you, both on your own and together as a couple. Your nurse and our counsellors' are available to you if it all gets too much and you need someone to talk to (refer to section on counsellors).

In Vitro Fertilisation (IVF)

IVF stands for In Vitro Fertilisation - which literally means that fertilisation of the egg with the sperm to form an embryo occurs outside the body. The first successful IVF treatment was in 1978. The technique has been refined and the success rates of treatment have increased greatly since the early days. IVF is still under-going a process of evolution to try to maximise pregnancy rates, minimise the risks and make it as easy as possible for couples.

Some situations are best treated by IVF rather than any other treatments. These include:

- Blocked or absent Fallopian tubes
- Very low sperm counts
- No success with other treatments.

IVF has the advantage of higher success rates than most other forms of treatment, and more control over the risk of multiple pregnancies. The disadvantages over other treatments include the cost, the intrusive nature of IVF (e.g. daily injections, regular blood tests and vaginal ultrasound scans) and higher risks of complications such as Ovarian Hyper stimulation Syndrome.

1. The Basic Steps:

In order to attempt to form an embryo in the laboratory, we need to obtain one or more eggs, and a supply of semen. In the early years of IVF, a woman's natural cycle was used and a single egg was collected at a time. We now give medications to stimulate the ovary to produce multiple eggs instead, in order to improve the chances of success. In order to stop the premature release (ovulation) of the eggs we also give ovulation blocking medicines.

Collection of eggs is performed under ultrasound guidance using a fine needle that passes through the wall of the vagina into the ovary. Semen collection is done by masturbation, but sometimes this too is done by using a needle to withdraw sperm from the testicle, or with a surgical incision in the testicle to identify sperm containing tubules.

After the eggs and sperm have been collected they are placed in a strictly controlled environment in an incubator. Many (but not all) eggs will fertilise within about 18 hours. The fertilised eggs begin to divide to form a multi cellular embryo.

One or occasionally more embryos are then placed into the woman's uterus using a fine tube, where (if all goes according to plan) they will implant and be nourished to develop into a pregnancy.

Additional hormone treatments are given to the woman following her embryo transfer to aid in this process. 16 days after the embryo transfer a pregnancy test is done to determine whether treatment was successful.

Now To Break This Down Into Steps In More Detail….

2. Timing

There is often a need in a busy IVF clinic to try to coordinate a woman's menstrual cycle to make it as convenient as possible for her and the staff as she goes through a cycle. In order to do this there are times when we will use the oral contraceptive pill to delay, or bring on a period at the right time.

3. Down-Regulation

Down-regulation is the process of turning off a woman's natural production of luteinising hormone (LH). LH is the hormone that triggers ovulation, and having all the eggs release before they can be collected is not a good thing to happen. There are different ways to do this. The most commonly used approaches are -

- **Long Down-Regulation.** 7 days after ovulation or 7 days before the next expected menstrual period you commence with either Synarel nasal spray or Lucrin injections (the choice is yours). Stimulation injections then start after you get your period. Both are continued until just prior to the egg pick up.
- **Short Flare.** Synarel or Lucrin is started on the same day as the stimulation injections, generally day 2 of the cycle. This can produce more eggs so it is often used in women who haven't responded well to previous stimulation cycles. The down side is that there is an increased risk of Ovarian Hyper stimulation Syndrome.
- **Antagonist.** Cetrotide or Orgalutran are medications that work differently to block ovulation. It is an injection which is usually commenced on the fifth or sixth day of stimulation injections. Some studies have indicated that there may be lower numbers of eggs obtained in women who use this. It might be useful for women who have responded poorly to a Flare cycle.

4. Stimulation

One egg is way better than none, but several eggs are really good. In order to encourage the ovaries to produce multiple eggs medications are given to stimulate the development of multiple follicles. The most common approach is to give daily injections of Follicle Stimulating Hormone (FSH). In a small group of women Clomiphene citrate tablets (Clomid, Serophene) or Letrozole may be used, but they generally produce a lower number of eggs. The dose that is used varies from one woman to the next and from one cycle to the next. Your age, weight, cause of infertility and previous response to treatment (if applicable) are used to help choose a dose that produces between 8 - 12 eggs ideally. Please remember that during your first IVF cycle we are learning a lot about how you respond to treatment, so if it doesn't all go quite according to plan, we have learned a lot about you to adjust your cycle more appropriately next time.

5. Monitoring

Each woman responds to stimulation injections differently, and even any individual woman can respond differently in different cycles. Hence it is important for us to monitor how you are responding to your treatment. We use a combination of blood tests and ultrasound scans to do this. The blood tests are looking at your oestradiol level, which is produced by the ovary. This gives us a rough idea of what is happening in terms of egg production. A high oestradiol either means there are a lot of follicles developing, or they are big ones, or both.

The ultrasound scans are done as trans-vaginal procedures. You will be asked to remove your underwear and a long thin ultrasound probe is inserted in the vagina. This permits us to get fairly close to the ovary so we can see what is going on. What we are looking for are the black collections of fluid in the ovary called follicles. Generally each follicle will be home to one egg, never more. We

can count how many there are, and measure how big they are. Once most of the follicles are 17 mm or more in size the eggs are generally ready to be collected.

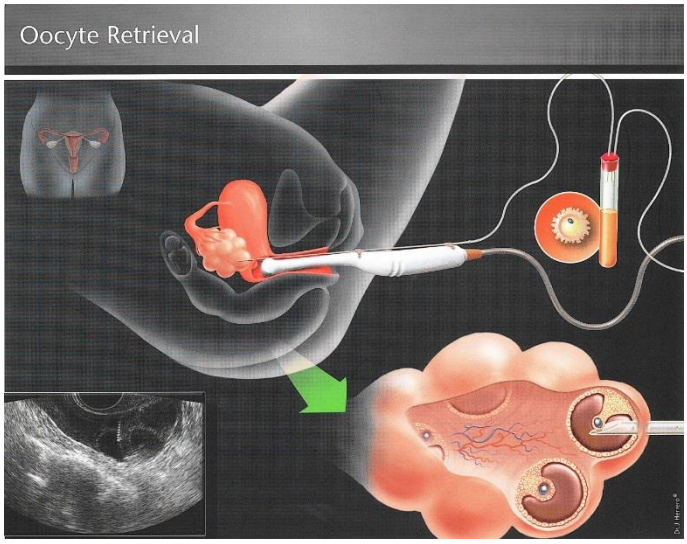
You will be required to have some blood tests during your treatment, we use QML pathology.

As a consequence of your monitoring we might recommend that you:

- not make any changes at all to the original plan,
- increase the dose of your stimulating injection after discussions with your doctor,
- increase or decrease the number of days of injections,
- cancel your cycle and stop your treatment completely.

6. Trigger Shot

Once your ultrasound confirms the presence of a number of mature follicles, there is one final step before we collect your eggs. Up until now we have stopped your pituitary from producing luteinising hormone (LH), but now we need you to have it. The eggs need to be exposed to this to undergo the final stages of development. LH also produces changes in the hormone production pattern of the ovary (switching from oestradiol to progesterone) that are vital to the early development of the embryo.



We do this by asking you to have a single injection of human chorionic gonadotrophin alpha, which is almost identical to LH and does the same job. We use Ovidrel. This injection is a different technique to your previous ones.

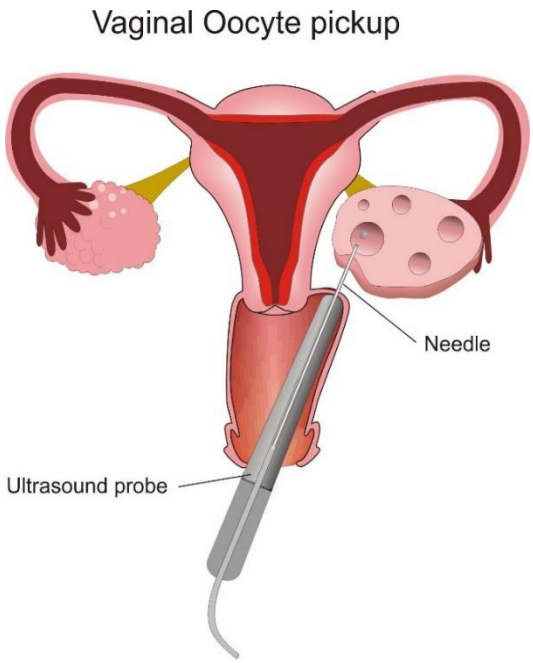
IT IS VITALLY IMPORTANT THAT YOU HAVE THIS INJECTION EXACTLY WHEN WE ASK YOU TO!!! Otherwise there is still a chance that you will ovulate before we collect your eggs and get none at all, or your eggs will be immature and not fertilise.

7. Egg (Oocyte) Collection Procedure

Your egg collection procedure will occur at either the Buderim or Bundaberg clinic or the Buderim Private Hospital on the Sunshine Coast or the Friendly Society Hospital in Bundaberg. You can choose to have your procedure under the comfort of a general anaesthetic (you are asleep) or in the clinic under oral sedation (you are awake – Buderim clinic only) and will be carried out by an IVF Specialist.

Generally, the choice is yours depending upon your circumstances to be awake or asleep so please discuss this further with your doctor.

A trans-vaginal ultrasound probe is used to locate the follicles on the ovaries (just the same as you have had done when you have had scans). A long thin needle runs alongside the probe and can be seen on the ultra-sound. The needle passes through the wall of the vagina and in to the follicles within the ovary. The fluid inside is gently sucked out and transferred into heated test tubes.



One of our scientists attends the procedure and will examine this fluid under a microscope as the procedure progresses, to identify the eggs within the fluid. The eggs are removed from the fluid, placed into a specialised culture medium, labelled and transferred to a transport incubator that controls the temperature and the oxygen and carbon dioxide balance closely.

The procedure generally takes half an hour depending on the number of follicles present. You might have some vaginal bleeding from the small needle puncture sites in the vagina. You might also have some pain, but will be offered pain relief for this. After a short stay in the recovery area you will return to the ward. You are able to go home once the nursing staff are happy with your progress and you feel up to it.

The egg pick up procedure is a low risk operation, but occasionally complications can occur. These may be related to the anaesthetic (e.g. Allergic reactions, severe vomiting) or to the surgery itself. Rarely the needle can pierce structures other than the ovary, such as a major blood vessel causing internal bleeding (which may require surgery to control and / or a blood transfusion), or damage the bowel causing leakage of bowel contents internally (which may require surgery and antibiotic treatment).

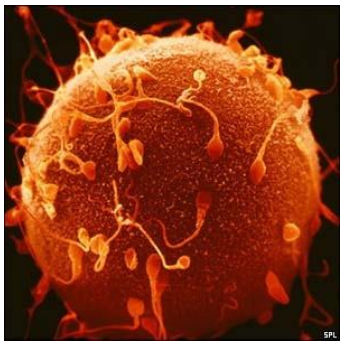
Sometimes it is impossible to reach the follicles with a needle from the vagina. This can occur as a consequence of scarring from surgery, infection or endometriosis. Generally, we will be able to recognise this during the monitoring process and discuss this with you. The alternative approach (and the one that was used originally for IVF) is to collect the eggs during a laparoscopy procedure, where the surface of the ovary can be directly visualised using a telescope passed through a small incision in your navel.

You MUST have another person drop you off to the hospital, collect you from the hospital, and stay with you for the remainder of the day.

We need your semen sample to be delivered to the IVF Unit about 45 minutes after the egg collection procedure. Your semen sample will then be prepared. Any sperm that appear abnormal or aren't moving will be removed, along with a lot of the fluid in the sample so we get a highly concentrated sample containing vigorous sperm. Sperm are then added to the culture medium in which the eggs are floating and they are returned to the incubator.

8. What Happens In The Laboratory

While you are recovering from your egg pick up, your eggs will be transported from the hospital to our laboratory. The scientist will then prepare your eggs for fertilisation by removing any cells stuck to the surface and placing the eggs in an incubator. Eggs and embryos are VERY sensitive and need to be maintained in a strictly controlled environment at precise temperatures and with the correct balance of nutrients, oxygen and carbon dioxide. Our incubators are highly specialised to allow us to control the environment in which your eggs/embryos are cultured.



The following day (about 18 hours after the sperm where added to the eggs in the incubator) the scientist will remove the eggs from the incubator and examine them through a microscope.

At this stage a fertilised egg will have two central rings called pronuclei. These are the two separate sets of genetic material, one from the egg and one from the sperm, which are needed to make an embryo. In general about 60 - 70% of all eggs will fertilise. Any eggs that have more than 2 pronuclei are discarded (as they produce an abnormal baby), and along with any eggs that don't fertilise at all.

The developing embryos are then returned to the incubator. Regular checks on their progress are made to ensure that they continue to develop normally. Embryos are graded in terms of their number of cells and the quality of the cells. The best pregnancy rates come from embryos with the highest grade. Your embryos will remain in the incubator until the time of your embryo transfer.

Special Note about Culture Media

The fluid that the eggs, sperm and embryos live in is called culture medium. It is a carefully balanced mix of ingredients, all necessary for the normal development of the embryo. One of these ingredients is the protein albumin. Albumin is purified from human blood and treated in order to reduce the risk of any contamination with infectious diseases such as hepatitis, HIV or BSE (mad cow disease). We use culture media manufactured overseas, which is licensed for IVF use in Australia.

In Australia all products such as drugs and supplements must be licensed by the Therapeutic Goods Administration (TGA), and all the culture media we use are licensed for this use with the TGA.

Fertility Solutions has every confidence in the quality of the culture media that we use, but we would like to make you aware of the fact that there is an exceptionally small risk of transmitting infectious diseases to you or your baby.

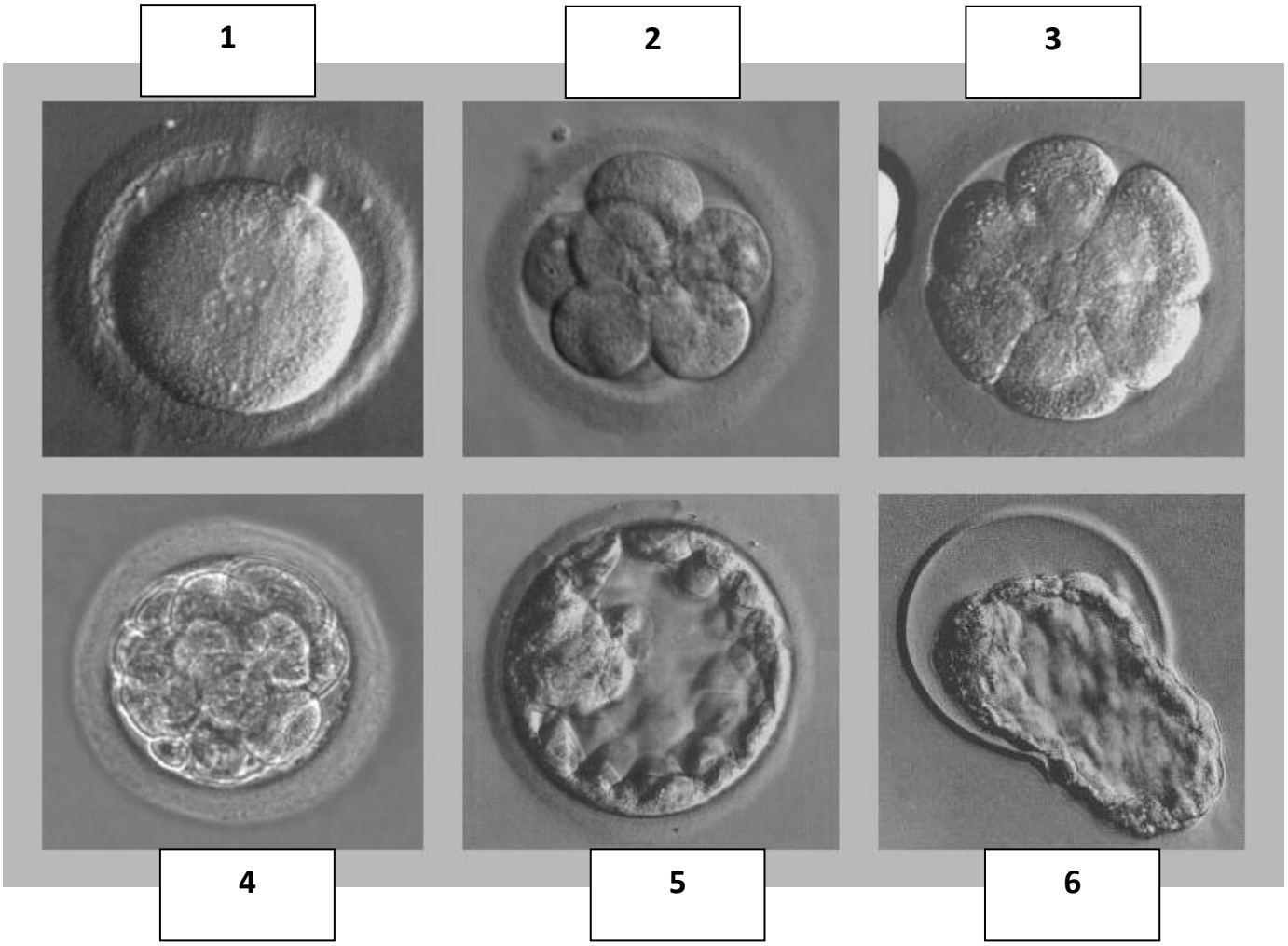
9. Human Embryo Development

1 Fertilised Egg at 2 Pronuclei Stage 2 – 8 Cell Stage

3 Cell Adhesion Stage

4 Compacted Morula Stage 5 – Blastocyst Stage

6 Hatching Blastocyst Stage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IVF Treatment Summaries

No two patients are exactly alike and, therefore, no two patient treatment plans will be exactly alike. However, we realize that patients need a general timeline to know what to expect during their cycle. Below is a standard long down regulation IVF cycle outline that summarizes the important steps involved in treatment. When your treatment plan has been developed, the IVF nurse will provide a more detailed and specific timeline for you.

1. Long Down Regulation Cycle

Contraceptive Pill (used when cycles need specific timing or if periods are absent) Approx. 12-21 days

↓

Synarel Approx. Day 18-31 of cycle. Sometimes commenced day 1-2 of period

↓

Baseline Ultrasound (Before commencement of FSH injections-may or may not be required)

↓

Stimulation (FSH injections) Approx. 10-14 days

↓

Blood test and Ultrasound 5-8 days after commencement of FSH injections

↓

Trigger Shot. Approx. 12 – 14 days after commencement of FSH injections

↓

Egg Pick up 35-37 hours after trigger shot

↓

Embryo Transfer 2 -5 days after egg pick up

↓

Pregnancy Test 16 days after embryo transfer

↓

Follow Up with Specialist for Pregnancy Ultrasound or further treatment planning

1st - 7 weeks pregnant (5 weeks after positive pregnancy test).

2. Short/Flare Cycle

Contraceptive Pill (used when cycles need specific timing or if periods are absent) Approx. 12-21 days

↓

Synarel may be commenced day 1-2 of period and then either used continuously until the trigger injection or only for 2-3 days

↓

Baseline Ultrasound (Before commencement of FSH injections-may or may not be required)

↓

Stimulation (FSH injections) Approx. 10-14 days

↓

Blood test and Ultrasound 5-6 days after commencement of FSH injections

↓

Commence GnRH Antagonist (Cetrotide or Orgalutran) to minimise the risk of ovulation on day 6 of injections.

↓

Trigger Shot. Approx. 10 – 14 days after commencement of FSH injections

↓

Egg Pick up 35-37 hours after trigger shot

↓

Embryo Transfer 2-5 days after egg pick up

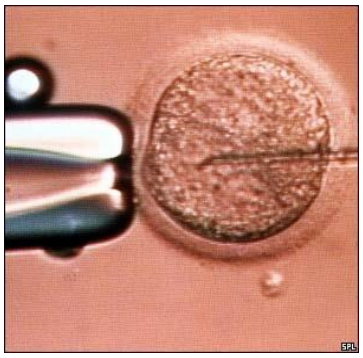
↓

Pregnancy Test 16 days after embryo transfer

↓

Follow Up with Specialist for Pregnancy Ultrasound or further treatment planning

1st - 7 weeks pregnant (5 weeks after positive pregnancy test).



Other Procedures That Can Be Used In Your IVF Cycle

1. Intracytoplasmic Sperm Injection (ICSI)

Intracytoplasmic Sperm injection is a technique that was developed in the 1980's right here in Australia in order to help achieve better pregnancy rates for couples where the problem was related to very low sperm counts. The first pregnancies using ICSI occurred in 1992. In the following 15 years there has been an explosion in the use of ICSI in IVF cycles as couples with previously untreatable infertility have been able to access treatment, possibly compounded by an increased incidence of male infertility around the world. Almost 50% of IVF cycles in Australia now use ICSI as part of the cycle.

The basic IVF cycle as outlined above is unchanged, except for what happens in the laboratory after the egg pick up procedure. After the semen sample is prepared, the egg is transferred to a special warmed dish and viewed under the microscope. An extremely fine tube is used to hold the egg still while a micropipette (an extremely thin tube) is loaded with a single sperm. This sperm is then injected into the body of the egg.

The resulting injected egg is then returned to the incubator and treated in the same manner as for standard IVF. The rates of fertilisation with ICSI are at least as good as and are sometimes better than standard IVF when there are markedly abnormal sperm.

2. Reasons For Using ICSI

These are some of the reasons why ICSI may be recommended for you -

- Very low sperm counts - as a rule anything less than 5 million sperm per ml is considered too low to be successful with standard IVF
- Anti sperm antibodies - if these are present they can stop the sperm from entering the egg, even when the sperm count is normal
- After vasectomy or for men with blocked ejaculatory ducts- a surgical sperm collection technique is used to obtain the sperm
- After vasectomy reversal surgery. Even when the semen sample appears normal, it is our experience that there is a high chance of failed fertilisation with standard IVF.
- Poor fertilisation rates in a previous cycle - if standard IVF results in a lower than expected rate of fertilisation then ICSI can be used to try to improve the rate of fertilisation of the eggs

3. Potential Problems With ICSI

The process of injecting the sperm into the egg can damage the egg so that it is unusable. This happens to less than 5% of eggs.

There can be genetic causes of very low sperm counts. These abnormal genes can be passed onto any children conceived through ICSI. Given that the children conceived by ICSI have yet to reach reproductive age themselves, we are unable to predict how big a problem this might be.

The natural process of sperm penetrating the egg is thought to involve a selection process so that only the genetically normal sperm are able to produce an embryo. We override this process in ICSI and there is no way to identify genetically damaged sperm just by their appearance alone. In addition, it is possible that pushing the micropipette into the egg can break some of the DNA strands in the egg and produce genetic damage. As a consequence of these concerns a close watch is being kept on all offspring conceived using ICSI.

At present the majority of the research indicates no increase in abnormalities or mental problems in these children. There is no evidence to date of an increased risk of cancer in these children.

4. Why Not Use ICSI for everyone?

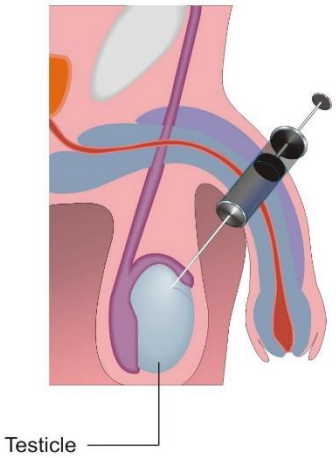
Firstly, it costs us more to do ICSI. Highly specialised expensive microscopes and pipettes are needed. It takes substantially more time for the scientist. There is a Medicare Rebate for ICSI.

Secondly, the concerns about passing on or causing genetic problems will remain unanswered for many years as these children grow up and begin families of their own.

In view of these issues, we prefer to use ICSI only for those couples where we feel that the success rates will be substantially better than other treatment options.

5. Surgical Sperm Collection (SSC)

The ability to achieve pregnancies for couples using very small numbers of sperm (less than 10 rather than needing several million!) has opened up some interesting new avenues of treatment. The best results with ICSI come when we use ejaculated sperm, but for men who have sperm production in the testicle but no sperm in the ejaculated sample, we are able to collect small numbers of sperm directly from the testicle. There are a number of different procedures that have been developed to obtain sperm directly from the testicle – all are known as surgical sperm collection (SSC).



TESA (testicular epididymal sperm aspiration) involves inserting a needle deep into the testicle to suck out small numbers of the tubules that contain sperm. MESA (microsurgical epididymal sperm aspiration) involves opening the testicle to identify sperm containing tubules using an operating microscope. There is a better chance of finding sufficient sperm for IVF using the MESA technique, but there are more risks and more post- operative pain using this technique.

SURGICAL SPERM COLLECTION For more information on this procedure please just ask for a copy of our information brochure.

Embryo Transfers

Putting an embryo back into your uterus is a pretty straight forward procedure that will happen in the IVF clinic. We will ask you to remove your underwear, and sit in a special chair that allows easy access. A speculum is placed in the vagina so that the cervix can be seen. A small amount of warmed, sterile saline is used to clean away any mucus. A thin tube is passed through the cervix into the uterus. Once this is in place the IVF Scientist will load your embryo into an even smaller tube (a

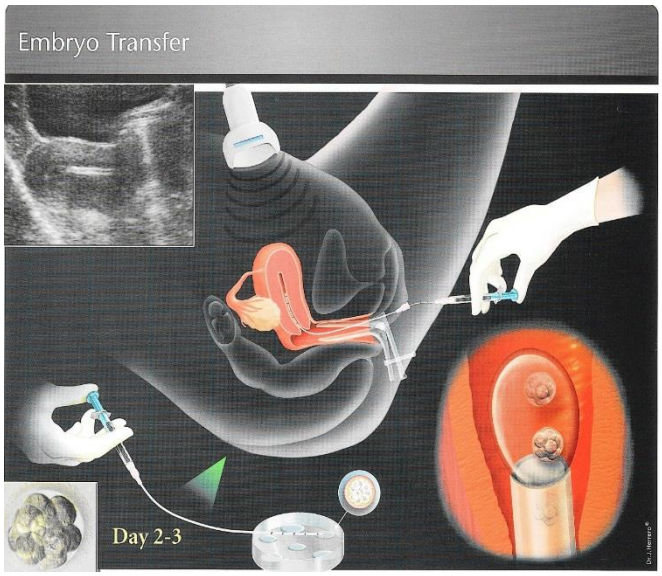
catheter) with a small amount of fluid. This tube is then fed through the one in your cervix, and the embryo is pushed out of the transfer catheter with a small amount of culture medium.

The tube through your cervix and the transfer catheter are then removed. The scientist inspects the transfer catheter under a microscope to be sure that the embryo has been released. The speculum is then removed and you are free to get dressed and go.

Embryo transfers are either performed by your Specialist or one of our accredited nurses. We will aim to let you know in advance who will be doing this for you, but sometimes our doctors can be called away for medical emergencies and you might have someone different.

1. How Many Embryos Can I have transferred?

It is a requirement of our clinic (and our accrediting body RTAC) that a single embryo is transferred in the majority of cases. We make it a policy to never transfer more than 2 embryos to the uterus at any one time. It is important that you discuss the number of embryos for transfer with your doctor.



2. Possible Problems With Embryo Transfer

- Sometimes none of the eggs that were collected will fertilise and there will be no embryos to transfer.
- Sometimes fertilisation will occur but one or more embryos will not continue to develop and no longer be viable, so that sometimes there are none available for transfer.
- It can sometimes be difficult getting the transfer catheter or the outer guide through the cervix into the uterus. This is more common in women who have never been pregnant before.
- Very rarely the process of embryo transfer can push germs from the vagina into the uterus and cause an infection. If this happens you would develop some or all of the following - an offensive vaginal discharge, worsening pain, fevers, general feelings of being unwell, and sometimes spotting. If you think that this is happening please contact the clinic or your specialist as soon as possible so we can start you on treatment.

3. When Is The Best Time To Have A Transfer?

Bulk Billed and Standard IVF cycles. If there is fertilisation and the embryo progresses as expected an embryo transfer will occur 2-3 days after the egg collection – this is known as a cleavage stage transfer.

Intermediate and Customised IVF Cycles. If there is fertilisation and the embryo progresses as expected an embryo transfer will occur 5-6 days after the egg collection – this is known as a blastocyst stage transfer.

The argument for transferring embryos at this later stage is that this is closer to the natural process where the embryo reaches the uterus about 5 days after ovulation; and it allows a longer time

period of observation in the laboratory, so that the very best embryo can be identified and used for the transfer in the hope that the chance of pregnancy from the current embryo transfer is higher.

Some embryos that appear viable at day 3 will not survive until day 5 or 6, so fewer embryos are available for transfer or freezing in a blastocyst transfer cycle, and sometimes none survive. Whether these embryos would have resulted in a pregnancy or not is unknown at this point.

For more information on this procedure please just ask for a copy of our information sheet.

4. After Your Embryo Transfer

In a normal period cycle the time between ovulation and the next period (or not if you are pregnant) is called the luteal phase. This is a time when the body makes large amounts of progesterone hormone. Progesterone prepares the uterine lining for the embryo and supports the early development of the embryo after implantation. In an IVF cycle we need to give you progesterone (or stimulate the ovaries to make it) as the hormones you used earlier in the cycle can interfere with your own ability to make it.

Progesterone is given as a vaginal gel called Crinone or in a pessary form - like a bullet shaped tablet called Oripro that goes in the vagina. The progesterone is absorbed very well through the skin of the vagina. It can't be taken as an oral tablet as stomach acid destroys the hormone. Whichever one of these you use it can get a bit messy by the end of your cycle, and you will find it more comfortable with a panty liner.

You need to keep taking your luteal phase treatment until you have spoken to the nursing staff on the day of your pregnancy test. If you have a positive test you will be asked to continue hormone support. Your Fertility Specialist will decide when to decrease and then stop this.

5. What To Do After Your Transfer

The basic principle is to get on with your life, without overdoing anything. You certainly don't need to spend 2 weeks in bed with your legs up the wall! Heavy physical work or extremes of temperatures (like a sauna) are not a good idea. Basically you should behave like you would during a pregnancy in terms of alcohol intake, diet and any medications you might use.

Do watch out for any unusual pain, bloating, vomiting or bleeding at this stage. If anything unusual is happening we want you to let us know what is going on.

6. Pregnancy Testing

Sixteen days after your embryo transfer we want you to do a pregnancy test. The hormones you are on can stop you from having a period even if you aren't pregnant so please don't assume that no period means that you are pregnant. Likewise, you can get some bleeding around period time and still have a successful pregnancy. Once you have tested please ring the clinic and let a Nurse know the outcome. You will be given further instructions about what to do next.

Frozen Embryo Transfer (FET) Treatment Summaries

No two patients are exactly alike and, therefore, no two patient treatment plans will be exactly alike. However, we realize that patients need a general timeline to know what to expect during their cycle. Below are some of the various types of FET cycles that can be used. When your treatment plan has been developed, your nurse will provide a more detailed and specific timeline for you. For all FET cycles Day 1 is the start of that cycle.

1. Programmed FET

- Day 1 of your period do a urine pregnancy test and notify the clinic of this result. Do not start any medications until you have spoken to a nurse.
- Once you have spoken to a nurse you may be asked to commence Progynova tablets daily. Progynova is a Hormone Replacement Therapy (HRT) tablet containing an Oestrogen and Progesterone hormone combination.
- Around day 10-14 of your cycle an ultrasound scan will be booked for you at the clinic
- At this scan we will be assessing the lining of your uterus (endometrium) and your ovaries. We expect to see that the endometrium is growing to a certain thickness and that there are no follicles growing on the ovaries. The nurse will then advise you when to start your pessaries and the day for your embryo transfer will be booked. If your endometrial growth is not at the required stage you may be asked to increase your Progynova tablets and attend for a repeat scan in a weeks time.
- Progesterone (Luteal) Support – Medications will be prescribed which will assist the endometrium develop to a stage that the embryo can implant in. These medication are called Oripro pessaries and Crinone gel and are to be inserted into your vagina (Orirpo can be inserted rectally). You will receive more information on these medications at the time of your cycle.

2. Medicated FET

- Day 1 of your period have a blood test. Call the clinic the next day for results and further instructions.
- Clomid or Letrozole tablets may be commenced daily for 5 days to stimulate follicle development. These can be commenced between days 2 and 5 of your cycle – a nurse will advise you on this.
- Day 9-14 of your cycle an Ultrasound scan will be booked for you at the clinic
- Your cycle will be monitored with scans and sometimes bloods tests until we see follicular activity of 1 or 2 follicles measuring 17mm or greater and a suitable endometrial thickness. Your doctor may request that a “trigger” injection called Ovidrel be administered so that timing of your embryo transfer can occur. A nurse will discuss with you when to start your pessaries. At this point your embryo transfer day will be booked.
- Progesterone (Luteal) Support – Refer to Programmed FET above.

3. Natural FET

- Day 1 of your period you will have a blood test. Call the clinic the next day for results and further instructions.
- We will book in an ultrasound scan Day 9-14 of your cycle at the clinic
- Your cycle will be monitored with scans and blood tests as with the medicated FET cycle above.
- Progesterone Luteal Support is to complete maturation of the uterine lining - Refer to Programmed FET above.

Medications Commonly Used By Fertility Solutions For Treatments

Elevit

- Contains a mixture of vitamins, minerals and trace elements. Includes 800 mcg of folate.
- Used for Prevention of neural tube defects and other birth defects. Prevention of iron and other nutritional deficiencies.
- Usual dose One daily.
- Side effects Minimal - constipation and heartburn sometimes.

Menevit

- Used for an antioxidant formulation designed to boost sperm health.
- Usual dose One tablet daily. Best to be commenced at least 3 months prior to fertility treatment commencing.

Folic Acid

- Other names Folate, Vitamin B9.
- Used for Prevention of neural tube defects (anencephaly and spina bifida) and other birth defects. Prevention of heart attack and stroke in adults.
- Usual dose At least 500 micrograms (0.5 mg) daily is recommended, starting one month prior to pregnancy, and continuing until at least 12 weeks of pregnancy.
- Side effects Minimal.

Oral Contraceptive Pill (OCP)

- Other names Microgynon 30, Loette, Diane 35, Yasmin, Brevinor, and many many more!
- Used for Prevention of pregnancy. In IVF the pill is used to make sure that a woman's period turns up at a scheduled time to assist with coordination of her cycle. Usual dose One tablet daily, at the same time each day. The strength of the hormones varies with different brands. Don't take the sugar tablets unless you are specifically instructed to do so.
- Side effects Headaches, nausea, breast tenderness, spotting. Rarely - Blood clots (DVT or pulmonary embolus), stroke. Long term (more than 10 years use) can increase breast cancer risk.

Clomiphene Citrate

- Other names Clomid, Serophene, Clomhexal
- Used for Inducing ovulation (egg production) in women who don't usually ovulate, producing several eggs at a time for women who do usually ovulate. In IVF it can be used in "natural" (or injection free) IVF cycles, or to ensure that ovulation does occur in women planning frozen embryo transfers.
- Usual dose 50 - 150 mg daily for 5 days early in the cycle. Sometimes treatment goes for longer than just 5 days to get the desired response.
- Side effects Hot flushes, headache, bloating and abdominal tenderness. Increased risk of multiple pregnancy (when used outside of an IVF cycle). Rarely ovarian hyperstimulation.
- Possibly associated with an increased risk of ovarian cancer.

Letrozole

- Other names Femara. It blocks production of Oestrogens.
- Used for Stimulation of follicle growth
- Usual Dose 2.5 – 5mg daily for 5 days
- Side effects These are due to the low oestrogen levels and are like menopause symptoms (hot flushes, night sweats, mood changes). Nausea and vomiting have been known to occur.

Synarel

- Other names Nafarelin, a GnRH agonist.
- Used for Down-regulation, prevention of premature ovulation in IVF cycles.
- Usual dose one spray in one nostril twice a day (800 mcg per day).
- Side effects Hot flushes, headaches, nausea, breast tenderness.

Bemfola

- Bemfola contains follitropin alfa, which is similar to follicle stimulating hormone (FSH) found naturally in humans.
- Used for the growth and development of several follicles within the ovaries.
- Usual dose is a course of one prefilled injection daily (always the same time in the morning)
- Side effects are headaches, stomach pain, swelling and bloating, nausea, vomiting, diarrhoea, Ovarian hyperstimulation syndrome. Blood clots (DVT and pulmonary embolus).

Rekovelle

- Other name Follitropin delta
- Used for controlling ovarian stimulation for the development of multiple follicles in women undergoing assisted reproductive technologies (ART).
- Usual dose is one pre-filled pen injected each day in the morning
- Side effects are headaches, discomfort and pain in the pelvic area, nausea, tiredness and Ovarian hyperstimulation syndrome.
- The dosing of Rekovelle for an individual is based on the woman's anti-Müllerian hormone (AMH) level and body weight

Gonal - F

- Other names Follitropin alpha, recombinant human follicle stimulating hormone.
- Used for stimulating the growth of follicles in the ovaries.
- Usual dose Generally 150 iu daily as an injection just under the skin, but varies depending on the individual. Starting on day 2 of the cycle and stopping 2 days prior to planned egg pick up.
- Side effects abdominal discomfort and bloating, tender breasts, headache, nausea. Ovarian hyperstimulation syndrome. Blood clots (DVT and pulmonary embolus).

Menopur

- Other names Menotrophin
- Used for women who are not ovulating (not producing eggs). It helps stimulate the ovarian follicles to release an egg. Menopur is given as an injection under the skin usually in the stomach.

- The dose of Menopur will depend on your individual situation and will be determined by your doctor.
- Side effects local reaction around the injection site, general rash or itchiness, headache, fever, dizziness, problem with eyes, joint paid.

Puregon

- Other names Follitropin beta, recombinant human follicle stimulating hormone.
- Used for stimulating the growth of follicles on the ovaries.
- Side effects abdominal discomfort and bloating, tender breasts, headache, nausea. Ovarian hyperstimulation syndrome. Blood clots (DVT and pulmonary embolus).

Orgalutran

- Other names Ganarelix
- Used for Prevention of premature ovulation in IVF cycles.
- Usual dose One injection (0.25 mg) daily, just under the skin. Usually started on the 5th day of FSH injections.
- Side effects Headaches, nausea, ovarian hyperstimulation.

Ovidrel

- Other names Choriogonadotropin alpha, recombinant human chorionic gonadotrophin hormone.
- Used for Triggering the final stages of development of the follicle prior to egg pick up, triggering ovulation.
- Usual dose One injection (250 mcg) just under the skin. Given 36 hours prior to planned egg pick up.
- Side effects Nausea, abdominal discomfort, headache. Ovarian hyperstimulation.

Crinone

- Other names Progesterone
- Used for Luteal phase support in IVF
- Usual dose 1 applicator full (90 mg) once or twice daily, as a gel inserted into the vagina.
- Side effects Nausea, headache, sore breasts, cramping, vaginal irritation & thrush

Oripro Progesterone Pessaries

- Used for Luteal phase support in IVF
- Usual dose 1 pessary (200 mg) once or twice daily, as a tablet inserted into the vagina.
- Side effects Nausea, headache, sore breasts, cramping, vaginal irritation and discharge.

Progynova

- Other names Oestradiol Valerate, Delestrogen
- Used to create a suitable environment for the embryo during an FET cycle by increasing blood flow to the uterus to cause thickening of the lining.
- Usual dose is one tablet taken 3 times per day orally
- Side effects headaches, breast pain, nausea, bloating and constipation

Provera

- Other names Medroxyprogesterone acetate, MPA, Ralovera.
- Used for to induce a period at a particular time. Occasionally as part of luteal phase support.
- Usual dose 10 mg tablets taken orally, one to three times a day.
- Side effects Nausea, sore breasts, headache, spotting, fluid retention, moodiness.

Success Rates

1. How We Judge Our Success Rates

One of the biggest issues in selecting a fertility treatment, or a fertility clinic is the question "how likely is it that this will work?" The question seems simple enough, but there are some grey zones that it is worthwhile being aware of when you try to interpret any results that you see on websites, in magazines or in advertising from fertility clinics.

The result that most couples want to know is the chance that they will get a baby to take home if they start a treatment cycle. This is not the pregnancy rate that you will see published on most IVF clinic websites. The success rates that you will see listed most often refer to clinical pregnancies per embryo transfer procedure performed. That is any pregnancy where a heartbeat can be found on ultrasound scan, from a treatment cycle that was successful enough to make it to the embryo transfer step. Why is this the one you see used? Some IVF cycles for example are cancelled before the egg pick up step, or no eggs are collected, or no embryos form. These couples are not included in the pregnancy rate. Some women will have a miscarriage or a stillbirth so that a "clinical pregnancy" isn't the same as the "take-home-baby-rate".

2. What to look for when examining success rates:

When you examine success rates, look closely at the details of the information.

- Is it only women under the age of 35 that are included (age group most likely to conceive)?
- Is it only couples who completed (rather than those that started) an IVF cycle?
- Is it any pregnancy (meaning a positive pregnancy test), a clinical pregnancy, or the live birth rate?
- Is it a cumulative rate - meaning the chance of pregnancy after one fresh IVF cycle, PLUS all the frozen embryo transfers that are done with embryos created in that first cycle?
- Do the success rates include the use of donated eggs?

As you can see, results can be reported in many ways so you really need to have a very close look so you are comparing clinics on exactly the same data.

The other factor that you need to be aware of to put your chance of success with treatment into perspective, is the chance that you will get pregnant WITHOUT treatment. For a fertile couples where the female is under the age of 35 this is a surprisingly low, around 22% per period cycle. That is 78% don't have success from one cycle. Depending on your ages, the reason for your infertility, and the time you have already been trying it could be much lower than this for you, although it is hard to ever say that the chance is zero (after all there have been babies born after successful vasectomy or tubal ligation operations).

ANZARD (Australian and New Zealand Assisted Reproduction Database) is a database to which all IVF Units in Australia and New Zealand are required to provide data. The most recent report is available online at https://npesu.unsw.edu.au/data-collection/australian- new-zealand-assisted-reproduction-database-anzard.

3. Definitions:

- **Biochemical Pregnancy** refers to a positive serum pregnancy test (bHCG)
- **Clinical Pregnancy** is defined as a fetal heart or intrauterine sac on ultrasound; examination of products of pregnancy which reveal chorionic villi; or definite ectopic pregnancy that has been diagnosed laparoscopically or by ultrasound.

Fertility Solutions has a Quality Management processes in place to closely monitor our success rates so that we can continually strive to maintain rates that are as high as can possibly be achieved. We are audited annually by an external accreditation, who have the power to close the clinic if our success rates are not up to the required standard.

4. Fertility Solution's Success Rates

For more information on our clinic success rates please refer to our website: https://fertilitysolutions.com.au/our-ivf-success-rates/

Factors affecting your chances of success:

5. Female Age

The age of the woman is a very strong predictor of whether you will be successful or not. After the age of 32 this begins to fall, and drops very quickly after age 40. Male partner age doesn't really alter the chance of success.

If you are a woman over the age of forty, we suggest that you consider the use of donated eggs from a younger woman, which gives the same chance of success as the younger woman's age.

Whether you have had a pregnancy before, either on or off treatment. Having previously been pregnant increases the chance that you will be successful again.

Your response to treatment

Some women do not develop a large number of follicles in response to the FSH injections, others do, for reasons that aren't entirely understood. The more eggs a woman makes the better her chances of IVF success.

6. Smoking

Whether it is one or both of you, cigarette and or marijuana smoking decreases your chance of success. You can't do anything about how old you are or how your ovaries behave, but you can do something about this one. We are happy to refer you to a counsellor for help with quitting.

7. Weight

Women who are over or underweight have a lower chance of pregnancy with IVF. If this applies to you then you might like to consider taking a few months to address your weight first. We can refer you to someone who can help, or you might like to try an established program like Weight Watchers.

8. Lots Of Luck And Persistence

At the end of the day, some couples get pregnant and some don't and we don't really know why that happens in an individual situation. So there certainly is an element of luck involved. As the old saying goes "pick yourself up, dust yourself off, and start all over again". The research shows that it can take someone up to 6 attempts at a pregnancy with fertility treatment before they will achieve a pregnancy.

Persistence with fertility treatment, like most other things in life, is the key to success.

More than half (50.6%) of women under 30 have a baby within five rounds of IVF and there are similar rates of success for women aged 30 to 34 (51.7%).

9. Take Home Messages

We do know it's hard and we are here to support you in any way that we can – but in the meantime:

- Be patient – fertility treatment does not work for everyone first time - and for some not at all
- Female age is important - don't leave it until it is too late!

Things Don't Always Go To Plan - Risks

No one wants to imagine that their cycle is going to be anything other than perfect. Please don't skip this section in the hope that it won't happen to you. We sure hope that you don't need to experience anything on this list, but we do want you to be prepared just in case.

1. Cycle Cancellation

Sometimes you just don't react the way we would expect you to react to treatment. This might be due to an under- response with no follicles developing, or an over response with too many follicles.

While it is disappointing, we do have your best interests at heart. We are trying to avoid any possible complications for you, and the extra costs associated with doing a cycle when there is very little chance of a baby at the end of it. The positive side is that we have learned valuable information about how you react to treatment, and can change what we do the next time so that you have a better chance of success. Sometimes you as the patient cancels a cycle for a variety of reasons – this is always your choice.

2. No Success

You took all the medications exactly as we asked (or close enough!). Everything appeared to be as good as it could be but now you are having a period. Why did you not get pregnant? It is usually hard to be specific. We know that in "normal" cycles there are often embryos made that don't "take" and form a pregnancy. It can be due to an abnormality of the chromosomes of the embryo. It might be due to a hormonal problem, or a blood clotting disorder.

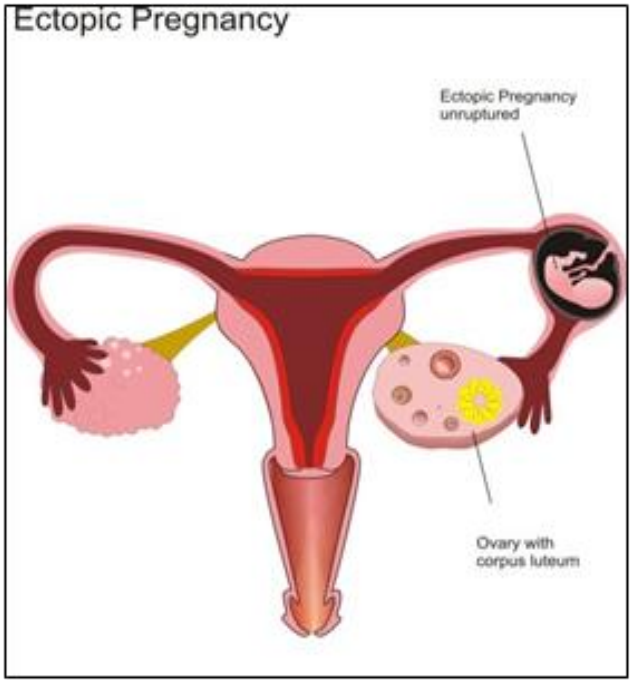
The first thing to do is to simply try again. We might change the medications or approach to treatment slightly but more often than not nothing needs to be changed. The research is very clear that it can take several attempts at fertility treatment before you may see a positive result. If however you have had repeated cycles with everything looking good without getting pregnant then it is probably time to step back and reassess. There might be further tests that would be helpful in working out how to improve your chance of success. This is especially so with inseminations as we usually only recommend a maximum of 3 cycles before suggesting IVF.

3. Miscarriage

You'd think that the worst of it was over once you saw that positive pregnancy test! Miscarriage is the loss of the pregnancy before 20 weeks, and can happen at any stage, but is most common before 12 weeks of pregnancy. About one in 8 pregnancies will be lost through miscarriage. The chances of miscarriage are increased for older women, with as many as 50% of women over age 40 miscarrying.

4. Ectopic Pregnancy

An ectopic pregnancy is when the embryo implants outside the cavity of the uterus and continues to develop. The most common place by far is the fallopian tube. The chances of this happening are slightly higher in an IUI pregnancy, especially if the fallopian tubes are known to be damaged. It happens in about 1 in 100 pregnancies, and can potentially be life threatening if not treated properly.



You might develop some light bleeding, and pain - generally more on one side than the other. Your pregnancy hormone test results might not rise as fast as expected, or we might see the ectopic (or the absence of a pregnancy in the right place) on ultrasound scan, even before you have any signs.

For most women an ectopic pregnancy will require surgery to treat it. Sometimes it will be recommended that a medication is used to inject into the tube which dissolves the pregnancy. Sometimes the fallopian tube involved (and perhaps the other one also) be removed to try to reduce the chance of it happening again.

Diagnosing ectopic pregnancies can sometimes be tricky, as it can be hard to tell them apart from miscarriage.

5. Multiple Pregnancy

Hang on you say - getting pregnant and having twins isn't my idea of a problem - so why is it on the "things that can go wrong" list? The aim of fertility treatment is to get you one baby at a time, so in some respects a multiple pregnancy (and especially if it is more than twins) can be considered a failure of treatment.

Why don't we want you to have a multiple pregnancy? It isn't just that it costs more to raise two or more babies rather than one or that you get less sleep. There are some really good medical reasons why it isn't good for you or your babies if there is more than one in your uterus at once. This is why we monitor your ovaries closely. Even when we see only one follicle there is still a risk (although small) of a twin pregnancy. This is either due to another follicle developing which we couldn't see on scan, or an identical twin pregnancy due to the embryo splitting in two.

In a "natural" cycle (that is you didn't take medicines to stimulate the ovary) the chance of twins is 1.2%. If we use Clomiphene and you get pregnant there is an 8 - 10% chance of you having a multiple pregnancy. For controlled ovarian stimulation (COS) cycles the risk jumps to 20%.

The statistics are quite sobering. The risk of death of a baby is increased by 5 times for a twin pregnancy and 16 times for a triplet pregnancy. For triplets as many as one in 7 babies will die. The rate of cerebral palsy (due to brain injury) is 4 times higher in twins than in single babies, and 20 times higher in triplets.

That's why multiple pregnancy is here in the "things that can go wrong" list. While we try to reduce this risk of this happening to you, we are unable to guarantee that it won't happen.

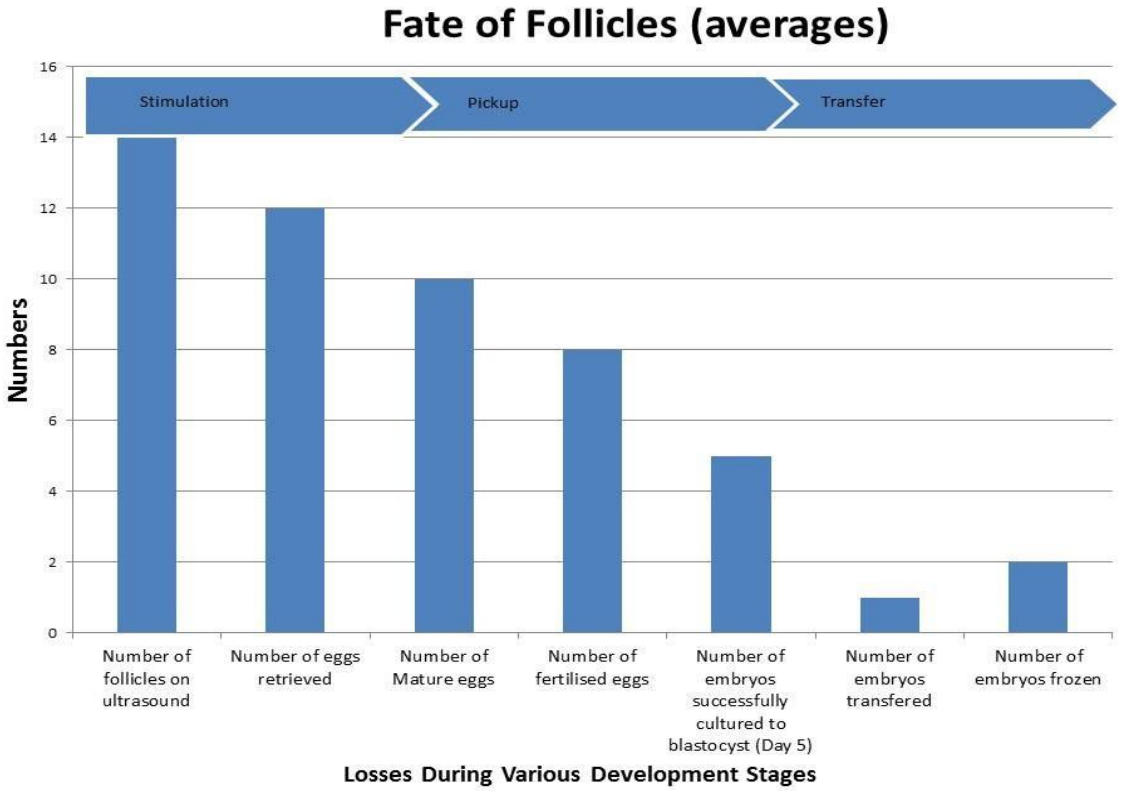
If you are unable to accept the risk of a multiple pregnancy then you should speak to your Specialist or Nurse about considering IVF instead. We have much more control over the rate of multiple births with IVF.

6. No Eggs Or Fewer Eggs Collected Than Expected

It is important to understand that not every follicle seen on ultrasound scan will have an egg collected from it at the egg collection procedure. It is expected that approximately 80-90% of follicles will yield an egg. Occasionally there are fewer eggs collected at the egg collection procedure than expected. Sometimes there are no eggs collected at the egg collection procedure. Having no eggs collected can be seen when there are a low number of follicles noted on the final scan before egg collection i.e. 4 or less. When there are fewer eggs collected than expected and particularly when there are no eggs collected we understand that this can be a very difficult time for you. We are sensitive to such situations and only too happy to spend time with you discussing your cycle and outcome and if there are any possible things that could be altered if you were to have another cycle.

7. We Started With More Follicles Than We Ended Up With Eggs and Embryos – What Happened?

Once the eggs have been collected not every egg will fertilise, although it is expected that approximately 70-80% will fertilise. Even once an egg has been fertilised, it does not necessarily mean it will be suitable for transfer or freezing. These results are very individual.

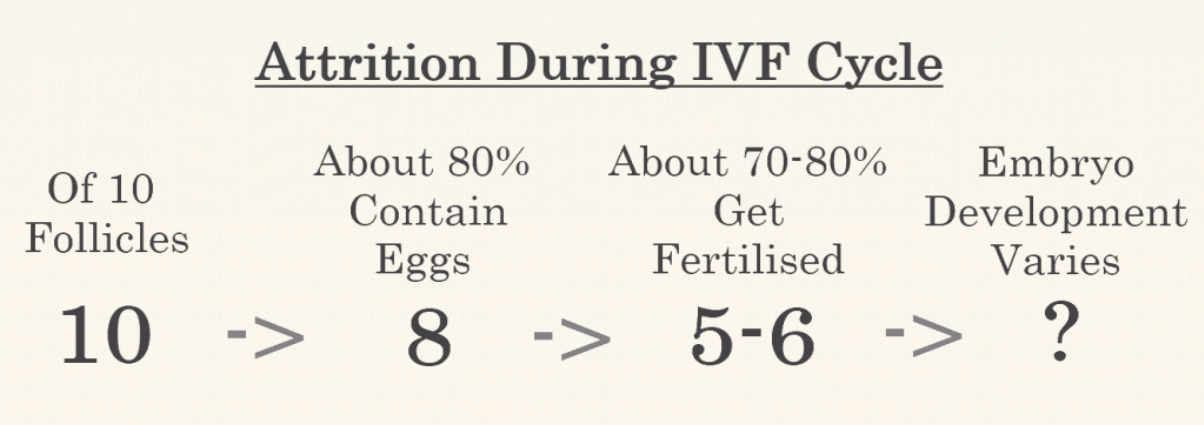


Some of these factors are out of anyone's control and nothing can be done. Our scientists often have to make decisions about the quality of eggs or embryos and whether or not to use them. While it is disappointing not to have them all used, we do have your best interests at heart. There is no point in

using embryos that are unlikely to achieve a pregnancy as this will simply result in you having to have more cycles, at extra expense, or pay for freezing embryos that are unlikely to survive thawing.

8. Fertilisation Failure

Sometimes we will get eggs from you at egg pick up but none of them will fertilise, so that no embryos will form. Fortunately this doesn't happen very often. It can be due to poor egg quality, or poor sperm quality. We might recommend further tests to try to find out what is causing it, or we might suggest ICSI if you weren't already using it. Sometimes you just have to try again. If the same outcome is found then you might consider using either donor eggs or donor sperm instead.



10. Implantation Failure

A lovely embryo went back into your uterus. You took all the medications exactly as we asked. But now you are having a period. This is called Implantation failure. Cycle cancellation and fertilisation failure are fortunately rare, but implantation failure is common.

Why did you not get pregnant? It is usually hard to be specific. We know that in "normal" cycles there are often embryos made that don't "take" and form a pregnancy. It can be due to an abnormality of your/your partner's chromosomes or of the embryo. It might be due to a hormonal problem, or a blood clotting disorder.

The first thing to do is to simply try again. We might increase or change the medications that you take during the luteal phase. If however you have had repeated cycles with normal embryos without getting pregnant (e.g. 5 or more) then it is probably time to do some more testing. PGD might help to pick if chromosome problems are the cause. Testing you for blood clotting disorders might reveal something. We might suggest that you take aspirin and/or heparin injections during your cycle.

If you have had 4 of more embryo transfer and no success we would recommend you go back and see your specialist for further discussions.

The positive side to your first cycle is that regardless of the outcome, we have learned valuable information about how you react to treatment, and can change what we do the next time so that you have a better chance of success.

11. Foetal Abnormalities

Approximately 2-3% of non-IVF conceived babies are born with some kind of abnormality. This might be minor (a large birth mark), or life threatening (a heart defect), or cause long term problems for the child as it grows up (spina bifida). One of the concerns about the widespread use of IVF has been the question as to whether there is an increased risk of abnormalities in babies born after IVF.

The research that has been done to date to answer this question has produced some conflicting results with some studies indicating no increase in risk, while others have shown as high as a doubling of the risk. Even if the risk is doubled the chance of a perfectly normal baby with IVF is about 96%.

Babies conceived with the use of ICSI we have less information about as we haven't been doing it as long. Again there is some disagreement in the results, but most would indicate that there might be a small increase in the risk of abnormalities.

12. Risks Of Egg Pick Up

The egg pick up procedure is a surgical procedure and like all surgical procedures, it carries some risk. The procedure is considered low risk however and the majority of women suffer no ill effects.

Some form of anaesthetic is required. All the anaesthetists that we use are fully qualified and experienced specialists and the hospital is equipped to deal with any anaesthetic problem that might occur.

During the egg collection procedure it is possible for the needle that it used to drain the fluid from the follicles in the ovary to puncture other structures nearby. We always perform our egg pick up procedures with an ultrasound monitor so that the tip of the needle can be seen at all times to minimize this. Structures that can be injured include major blood vessels, the bladder and the bowel. Serious internal bleeding is exceptionally rare in IVF but may require a blood transfusion, or possibly even open surgery to identify the source of the bleeding and control it. Likewise a major injury to the bladder or bowel might need major surgery to repair it.

Prior to inserting the needle the vagina is washed with a saline solution to reduce the number of bacteria that are present. We prefer not to use antiseptic solutions as they can harm the eggs if they come into contact with it. In exceptionally rare situations it is possible to develop an infection inside the pelvis near or in the ovary if germs are pushed in there on the tip of the needle.

13. Risks Of Embryo Transfer Or Inseminations

The embryo transfer procedure is very low in risk, similar to having a Pap smear test. Rarely, an infection can occur in the uterus (called endometritis) which produces pain, discharge and bleeding. If left untreated the infection could spread elsewhere and be potentially serious. It is treated with antibiotics, and sometimes admission to hospital might be needed if the infection is particularly severe.

14. Ovarian Cancer

Any type of treatment that stimulates a particular type of tissue or organ might possibly increase the risk of cancer. The concern with IVF and other forms of fertility treatment is that there might be an increased risk of ovarian cancer in these women later in life. The question is actually quite difficult to answer at present.

It can take decades for cancer to develop and human IVF has only seen around for 35-45 years so large numbers of women who have had IVF are only starting to get to the high risk age. IVF has changed dramatically over the years and the types of treatments we do now are very different to what those women will have had.

The other reason it is hard to answer the question is that having a baby is protective against ovarian cancer. So not surprisingly, amongst women with ovarian cancer who never had a child there are

many who had some form of fertility treatment. Whether their cancer was due to fertility treatment, or not having a baby there is no way to be sure.

The best research to date seems to indicate that there might well be a small increased risk of ovarian cancer, but this seems to be limited to women who never became pregnant.

At present there is no screening test for ovarian cancer, but there is a lot of research going on and hopefully one will be available in the future.

Ovarian Hyperstimulation Syndrome (OHSS)

1. What Is It?

Ovarian Hyper Stimulation Syndrome (OHSS) is a potentially serious complication of fertility treatments where the ovary is artificially stimulated. It occurs in about 5% of all IVF treatment cycles, and is severe in about 1% of all cycles. It generally begins to cause problems about 4 or 5 days after the egg pick up procedure (or after ovulation in non IVF cycles).

The ovary swells up quite dramatically and leaks large amounts of protein rich fluid inside the abdomen. This fluid comes from the blood stream which is then left very concentrated so that there is an increased chance of blood clots forming. Very rarely OHSS can be so severe that it is fatal.

To get OHSS you need to have had some form of stimulating drug. Generally this is FSH injections, but it has been known to occur with clomiphene. To trigger the onset of the problem you then need for ovulation (or a trigger injection) to occur. OHSS lasts for about 10 days generally, but if you become pregnant it can last for several months and tends to be worse.

OHSS is more common in younger women, women with polycystic ovary syndrome, women with high levels of oestrogen during their cycle, or large numbers of follicles developing on the ovary. Women who have had it before are at high risk of having it happen again.

In order to try to prevent it happening we try to minimize the dose of stimulating hormones while still getting a good response. This is why younger women will generally have a much lower dose of FSH than older women.

If we feel that you are at very high risk of developing OHSS then we will recommend that your cycle be cancelled, and you stay on your down-regulation drug so that you won't ovulate, to minimise the chance of you getting OHSS. Sometimes we might do an egg collection for you but freeze all the embryos so there is no chance of you getting pregnant and ending up sick for weeks and weeks.

Even with these precautions we still get a number of cases of OHSS from time to time.

2. What To Watch Out For

If you are developing OHSS your belly will get bigger and quite sore. The increased fluid inside your abdomen can be quite impressive and make you look like you are several months pregnant. As it increases in size you get increasing pain. Pressure on the bowel produces nausea and vomiting. Pressure on the kidney reduces your urine production so you may urinate less often and it might be dark yellow.

As the fluid increases it can also press on your lungs and make it difficult to catch your breath and even painful to breathe. This tends to be worse with you lying down. You can also get marked swelling of the outside of your genitals.

If you are getting abdominal pain that is getting worse rather than better after your egg pick up, especially if you feel nauseous or are vomiting - let the clinic know. Don't see your GP about it. For starters, Medicare won't give you a rebate for your visit and secondly most GP's have never seen this and might not know that it is as serious as it can be. Likewise the emergency department of the hospital might not know much about it. If you do choose to use the Emergency Department then we want you to INSIST that they ring your IVF specialist or the Doctor on call for Fertility Solutions before they send you home.

3. What Happens If You Have OHSS

We will want you to be seen by your IVF Specialist that day. They will examine you and arrange some blood tests. If it is a fairly mild case then they may send you home with pain killers, an anti-nausea tablet, aspirin to prevent blood clots, and instructions to rest and have a high protein intake. They will want to review your progress to make sure you are getting better.

If you have a severe case then it will be recommended that you be admitted to hospital. You will have an intravenous drip to provide you with fluid and protein. You will be given strong pain killers and anti-nausea medications. It is important that we monitor exactly how much fluid goes in and how much comes out. To do this accurately we might put a catheter into your bladder.

You will be asked to wear compression stockings, take aspirin and have daily injections of a blood thinner to reduce the risk of a blood clot. If there is a very large amount of fluid collecting in your abdomen a drain tube may be inserted to relieve the pressure.

Regular blood tests will be done to monitor your progress and you will be kept in hospital until you are getting better, which might take several weeks.

I'm Pregnant – Now what?

1. Congratulations!

We are really pleased! Your specialist will want to see you for an ultrasound scan about 5 weeks after your embryo transfer was done (7 weeks of pregnancy). You will need to ring your specialist's office to make an appointment to have this done.

2. Pregnancy Care

Our Fertility Specialists are all also Obstetricians and therefore are able to continue caring for you through the pregnancy if you wish. If you were referred to us by another obstetrician you might prefer to go and see them for your pregnancy care. If you don't have private insurance and finances are an issue then you might like to choose to have your care at a public hospital.

Having had fertility treatment doesn't make a difference at all to your pregnancy now you are pregnant, and you can expect the same standard of care that any pregnant woman would receive.

3. Emotions At This Time

Not surprisingly most couples are pretty pleased with themselves at this point! However we do find that some couples (especially those that have been trying for longer time) have been so focused on GETTING pregnant that they can feel a bit lost about what to do about BEING pregnant.

There are lots of great books out there with pregnancy information, and your obstetrician and the midwives can also help out with any questions that you have. It is pretty common to find yourself

very anxious and uncertain, wanting to do the very best that you can to ensure the arrival of a healthy baby.

Firstly, even if you are getting some bleeding, do a pregnancy test for us anyway.

We have all seen situations where there has been a bit of bleeding when someone's period was due, but they turned out to be pregnant anyway. Assuming that you have done this and the test was negative, please let us know. We understand that you might feel more like curling up in a ball at this point in time, but we need to know what it going on.

We may ask you to stop all your fertility medications at this point. Even if your period hasn't started yet, stopping your medications will usually make it happen within a few days.

I'm Not Pregnant – What Are My Options?

This depends on a number of factors. Mostly how you both are doing in yourselves. Don't rush in to treatment if you feel terrible. Having a month off to regroup emotionally might be helpful.

If you have frozen embryos, then you will need a month's break after your IVF cycle and will need to see your specialist who will arrange an appropriate treatment plan. If you don't have any frozen embryos, it's a good idea to arrange to see your IVF Specialist and speak to them about any changes they might recommend to a future cycle to improve your chance of success.

The most important thing to remember is that just because this cycle didn't work, it doesn't mean that it'll never work. Hang in there and keep on trying!

1. Coping With Disappointment

Yes it is hard, and it isn't fair, and it's OK to be upset. Be reassured that you aren't alone and that others have been through this before and survived. Be gentle on yourself and don't beat yourself up.

We know that there is very little that you can do or not do that make a difference to the "luck" factor that gets you a positive result. So it isn't your fault.

Take some time out before returning to your "pre-IVF" life routine if you need to.

Alternatively some people find that staying busy helps them to feel normal again. Be good to each other. It's not worth jeopardizing your relationship with your partner.

Speak to a Nurse, or arrange an appointment with our Counsellors if things aren't getting any better.

Transferring To Another Clinic

Before any medical records, frozen embryos, oocytes or sperm are able to be released from Fertility Solutions, all outstanding accounts must be paid in full and all the relevant Fertility Solutions consent forms completed.

Please call us for the relevant paperwork. When the consent form(s) has been completed please send us the original so we can then organise to transfer your oocytes/embryo's or sperm.

To reduce the risk of a breach in patient confidentiality, Fertility Solutions recommends releasing patient information to a medical practitioner or an accredited fertility clinic.

If you want all of your medical records to be released directly to you, a fee will be applicable depending upon the size of your file. Processing fees will apply if you request your whole file to cover nursing staff to review and collate the documents and a printing in black and white. Postage

will also be applicable unless collecting records directly from the clinic. If you only require a summary of your treatments no processing fees apply.

All outstanding accounts with Fertility Solutions (outstanding storage fees/ treatment fees etc) must be paid in full along with the original/hard copy of this consent being returned to Fertility Solutions before the medical records can be released.

We will make every effort to ensure your medical information is available for the date above however, this cannot be guaranteed. It can take up to four (4) weeks to process the request from receipt of this consent.

Glossary

ACCESS
Australian National Fertility Support Network

AI
Artificial Insemination

Albumin
A protein found in blood, an essential ingredient in culture medium.

AMH
Anti-Mullerian Hormone (indicates ovarian reserve/approx. qty of eggs remaining)

ANZARD
Australian and New Zealand Infertility Reproduction Database

ANZICA
Australian and New Zealand Infertility Counselling Association

ART
Assisted reproductive technology - includes medical treatments for infertility such as artificial insemination and IVF.

ASAB
Anti-sperm Antibodies

Beta hCG
Quantitative beta human chorionic gonadotropin (pregnancy test)

Blastocyst
An embryo at around 5 days of age, which has begun to develop a fluid collection in the centre of the embryo.

Catheter
A long thin tube that is inserted into a body part e.g. urinary catheter into the bladder, or a transfer catheter into the uterus.

CF
Cystic Fibrosis. A genetic condition occurring in 1 in 2000 babies, making the most common genetic disorder in Australia. Causes damage to the lungs leading to respiratory failure.

Chromosomes

Long strands of DNA containing all the genetic information. There are 2 set of 23 chromosomes in human, one from the sperm the other from the egg, making 46 in total.

Clomid
A medication used to trigger ovulation

Culture Medium
A mixture of water, salts, nutrients and proteins needed for survival of eggs, sperm and embryos in the laboratory.

DET
Double embryo transfer

DNA
Deoxyribose nucleic acid, the chemical building blocks that make up the genes and chromosomes.

Downs syndrome
Or Trisomy 21. A chromosome disorder caused by an extra copy of chromosome 21. Occurs in about 1 in 800 births, more common in older mothers.

E2
Oestradiol (also known as Estradiol or Estrogen)

Embryo
A cluster of more than one cell that develops as a result of the fertilization of an egg with a sperm.

EPU
Egg pick-up (procedure to collect eggs from the ovaries – also called OPU or oocyte pick up)

ET
Embryo transfer

FA
Freeze All

Fertilisation
When an egg and a sperm join together to form an embryo.

FET
Frozen embryo transfer

Follicle
Small balloon of fluid that develops on the surface of the ovary, contains a single egg.

FS
Fertility Solutions

FSA
Fertility Society of Australia

FSB
Fertility Solutions Bundaberg

FSH
Follicle Stimulating Hormone. A hormone produced in the pituitary gland under the brain. Promotes the development of follicles on the ovary.

FSSC
Fertility Solutions Sunshine Coast

Genes
Pieces of information created by a code of DNA molecules. Many join together to form chromosomes.

GnRH
Gonadotropin Releasing Hormone (a hormone responsible for triggering the release of FSH)

GP
General Practitioner

hCG
Human chorionic gonadotropin. A hormone produced by the embryo, used as the basis on pregnancy tests. Also given as an injection to trigger ovulation or in the luteal phase

Hepatitis
An infectious disease affecting the liver. Hepatitis B and C are the more serious forms of this.

HIV
Human Immunodeficiency Virus. The cause of AIDS (Acquired Immune Deficiency Syndrome).

Hormone
A chemical that is made by an organ and has effects on other tissues elsewhere in the body.

HSG
Hysterosalpingogram. An X-ray test that shows the outline of the inside of the uterus and fallopian tubes. Used to check for blocked fallopian tubes.

HyCoSY
Hysterosalpingo-Contrast-Sonography

ICSI
Intracytoplasmic Sperm Injection. Also called micro-injection. A single sperm is placed deep within the structure of a single egg using a very fine needle.

Implantation
The process where an embryo burrows into the endometrium and begins to form a placenta so that a pregnancy occurs.

IMSI
Intracytoplasmic Morphologically Selected Sperm Injection (a type of assisted reproductive technology)

Incubator
A piece of laboratory equipment that is used to house developing embryos, it has strictly controlled temperature and balance of oxygen and carbon dioxide.

Insemination
The medical process of placing sperm inside a woman's vagina or uterus in order to achieve a pregnancy.

Intercourse
Sex involving placing the penis in the vagina.

IUI
Intrauterine Insemination (a type of assisted reproductive technology)

IVF
In Vitro Fertilization. Eggs and sperm are mixed in the laboratory to forms embryos used to try and achieve a pregnancy.

LH
Luteinising Hormone. A hormone made by the pituitary gland that is involved in development and release of the egg. Important for development of progesterone production in the follicle after ovulation.

Luteal phase
The part of the cycle between ovulation and the next period (or positive pregnancy test)

LSP
Low Sperm Count

MESA
Microsurgical epididymal sperm aspiration. A surgical procedure to collect sperm directly from the testicle.

Metformin
A diabetes medicine sometimes used for lowering insulin and blood sugar levels in women with polycystic ovary syndrome (PCOS)

MF
Male Factor – relates to issues with sperm, may cause difficulties trying to conceive

Mosaicism
A genetic disorder that affects only some but not all of the cells of a developing embryo.

NPSU
National Perinatal Statistics Unit

OCP
Oral contraceptive pill

Oestradiol
The main form of oestrogen hormone made by the follicles on the ovary. Causes development of the uterine lining.

OHSS
Ovarian Hyperstimulation Syndrome (a possible complication from some forms of fertility medication)

OI
Ovulation induction (fertility treatment that induces ovulation to occur)

Oocyte
Egg, containing chromosomes from the mother

OPU
Oocyte pick-up (procedure to collect eggs from the ovaries also called EPU)

PESA
Percutaneous Epididymal Sperm Aspiration (a technique used to extract sperm when the man has a blockage of the vas deferens)

PICSI
Physiological Intracytoplasmic Sperm (a technique used in ICSI to help select the healthiest sperm)

Progesterone / P2
A hormone produced by the ovary, mostly in the luteal phase. Supports the developing embryo.

Pro-nuclei
A circular structure seen inside the fertilised egg, contain one complete set of chromosomes. There are normally two - one from the egg and one from the sperm.

PV
Per vagina (medication administration)

Rubella
Also known as German Measles. A viral infection causing fever, rash and flu like symptoms. Can cause foetal abnormalities if it occurs during pregnancy. A vaccine is available.

RTAC
Reproductive Technology Accreditation Committee

SA
Semen Analysis

Semen
The fluid that is produced from the penis at ejaculation, it contains sperm and the nutrients needed for them to do their job

SET
Single embryo transfer

SFA
Sperm Functional Assessment, also see semen analysis

Sperm
Small cells with a tail that are found in semen. Contains genetic information that merges with an egg (oocyte) to form an embryo

STD /STI
Sexually transmitted disease / infection

SSC - Surgical Sperm Collection
Surgically collecting sperm directly from the testes under a local anaesthetic

Syphilis
An infection caused by the spirochaete Treponema pallidum. Sexually transmitted and can cause foetal abnormalities or long term brain injury if untreated. Can be tested for with a blood test. Treated with penicillin

TB
Testicular Biopsy

TESE
Testicular Sperm Extraction. A technique to harvest sperm directly from the testicle

TESA
Testicular epididymal sperm aspiration. A technique to harvest sperm directly from the testicle

Testicle
The organ in men that is responsible for the production of sperm, located in the scrotum

Trigger
Injection given to induce ovulation

TSH
Thyroid Stimulating Hormone

Turners syndrome
A chromosome disorder due to a missing X chromosome. The baby is female but generally infertile

TVOPU
Transvaginal oocyte pick-up

TVUSS
Transvaginal ultrasound scan

USS or Ultrasound
A technology that uses sound waves to generate an image of internal structures

Zona pellucida
A thick layer around the outside of the egg.

GYNAE TERMINOLOGY

Adenomyosis
Endometrial tissue invading the myometrium

Amenorrhea
Primary- no menstruation by age 16 years

AO
Anovulatory (this means no ovulation is occurring)

Blocked tubes
Tubal occlusion

Cervix
The opening into the uterus from the vagina.

CIN
Cervical intraepithelial neoplasia (related to PAP tests, can be 1, 2, 3)

D&C

Dilatation and curettage. A surgical procedure used to obtain a sample of the endometrium, or to treat a miscarriage.

Dysmenorrhea
Painful periods

Dyspareunia
Painful sexual intercourse

Dysuria
Painful urination

EM - Endometrium
The tissue (mucous membrane) that lines the uterus.

Endo
Usually meaning Endometriosis

Endometrial hyperplasia
Abnormal thickening of endometrium

Fallopian Tubes
Thin tubes that start near the ovaries and end at the top of the uterus, carries eggs and sperm, this is where natural fertilization occurs, then the embryo passes through to the uterus.

Fibroids (also known as Leiomyoma)
Non-cancerous tumours that can form in the various layers of the uterus

Laparoscopy
Small incisions are made in the abdomen (belly), and a telescope is inserted to view the internal organs, and perform surgery

LNMP
Last normal menstrual period

LMP
Last menstrual period

Menorrhagia
Heavy/prolonged menstrual bleeding

Myometrium
Muscle layer of uterus

Ovary
An organ deep within a woman's pelvis close to the end of the fallopian tubes. Responsible for egg and hormone production

Ovulation
The process of release of the egg from the follicle on the ovary

Pap smear
A scraping of cells collected from the surface of the cervix which is tested for abnormal cells that might lead to cancer of the cervix.

PID
Pelvic inflammatory disease

PCO
Polycystic Ovaries

PCOS
Polycystic Ovarian Syndrome (a condition where follicles in a woman's ovaries stall during development and form cysts instead of releasing an egg)

PMS
Premenstrual syndrome

STM
Symtpo-thermal method of cycle/ovulation tracking

TTP
Time to pregnancy

Uterus
Also called the womb. Sitting at the top of the vagina it is where the embryo normally implants and grows until ready for birth.

Vagina
The tube that connects the uterus to the outside of a woman's body

OBSTETRIC TERMINOLOGY

Amniocentesis
Sample of amniotic fluid - an antenatal test for chromosomal abnormalities

APH
Antepartum (prior to birth) haemorrhage

CVS
Chorionic Villi Sampling – an antenatal test for chromosomal abnormalities

EDC /B
Estimated date of confinement / birth

EDD
Estimated due date (birth)

FHR
Fetal heart rate

GDM
Gestational diabetes mellitus

LUSCS / LSCS
Lower Uterine Segment Caesarean Section

M/C or Miscarriage
The loss of a pregnancy prior to 20 weeks of pregnancy.

Neural Tube Defect
A group of abnormalities of the brain and spinal cord, includes anencephaly and spina bifida.

NIPT
Non-invasive prenatal test

NT
Nuchal translucency scan (an ultrasound done between 11 and 14 weeks of pregnancy to test for chromosomal abnormality – usually Downs syndrome)

NVD / NVB
Normal vaginal delivery/birth (same as SVD)

PPH
Post-partum (post delivery) haemorrhage

PET
Pre-eclampsia toxaemia

PHTN / PIH
Pregnancy induced hypertension (HTN)

ROM/PROM
Rupture of membranes / Premature Rupture of Membranes

Spina Bifida
An abnormality of development of the spinal cord that results in damage to the spine. The severity depends on where the problem is

SVD / SVB
Spontaneous vaginal delivery/birth (same as NVD)

VE
Vacuum extraction. VE can also refer to vaginal examination.