repromed

Your personal journey planner

repromed.co.nz

Welcome

Kia ora and welcome to Repromed.

As one of Aotearoa New Zealand's leading fertility clinics, Repromed gives you the best of both professional and personalised care as you journey towards your dream of having a baby. We understand that fertility treatment can be a daunting and sensitive issue, so we make it a priority to provide clear and realistic information to help you know what to expect every step of the way. We will respect your privacy and uphold your cultural and personal values at all times.

At Repromed you get the combined knowledge and expertise of the whole team in a supportive and compassionate way. Our goal is to develop an individualised treatment plan that is mindful of your emotional and lifestyle needs and we specialise in providing treatment options for complex cases.

Our specialists are recognised nationally and internationally for their clinical experience, academic credentials and research in the field of Reproductive Medicine. Our highly qualified and experienced team of medical specialists, embryologists, nurses and counsellors regularly attend and present at international conferences to ensure Repromed remains at the cutting edge of world class technology.

Safety and ongoing quality improvement are central to what we do with our credentialing including GlobalMark accreditation in NZS 8134 Ngā Paerewa Health and Disability Services Standard, RTAC (Reproductive Technologies Accreditation Committee) and Rainbow Tick.

We offer you the Repromed difference – a level of passion and expertise that comes from the heart. This means we will do our absolute best to help you on your journey.

Ngā mihi,
Dr Devashana Gupta
Medical Director

FERTILITY EXCELLENCE WITH HEART

Our values


Ngākau aroha – Compassion
People first
Kotahitanga – Unity
Together, all the way
Pūkengatanga – Expertise
Knowledge, technology and taking initiative
Ngākau pono – Integrity
Doing the right thing
FERTILITY EXCELLENCE WITH HEART

Contents

Introduction

What to expect on your journey with Repromed

This journey planner has been designed to provide everything you need to know about your treatment options, so that you can make informed decisions about your fertility treatment.

We know that you'll have many questions along the way, so please feel free to ask our Repromed staff at any time. You can also visit our website at **repromed.co.nz** or our social channels @**repromedNZ** for updates on treatments, news, and personal insights from our clients.

All clients are welcome and valued at Repromed. We are proud to be the first fertility clinic and health care provider in Aotearoa awarded with Rainbow Tick certification, a quality improvement programme designed to make sure an organisation specifically welcomes and values sexual and gender diversity.

Please note that there's a glossary at the end of this journey planner for any terms you may be unfamiliar with. This journey planner serves as a resource during your entire fertility journey with us.

About our team

You'll have a dedicated team that will work with you during your treatment. Here's a brief explanation of who we are and what we do.

Doctors

Our fertility specialists are extremely experienced and experts at diagnosing fertility issues and recommending the best treatment options. We're approachable and offer flexible appointment times including some evening clinics.

When you'll see us

- At your first specialist appointment, your review appointment and your orientation appointment.
- During performance of any fertility procedures such as ultrasound scanning, egg collection, testicular biopsy, or embryo transfer.
- When we receive the results of any investigations ordered during your appointments – we'll contact you via email.

Your main point of contact with us is via the nursing team. If you have a question or concern that you want your doctor to address, please ring or email the nurses who will relay that message to us. We aim to reply to your requests within 48 hours.

Nurses

We provide you with individualised support during each step of your fertility journey with Repromed. We are your go-to for coordinating the information you require to carry out your treatment cycle.

When you'll see or hear from us

- At your orientation appointment after your appointment with the doctor.
- At your medication injection education session.
- When you book in for treatment.
- After you have had your ultrasound scans.
- After your egg collection, we will provide you with instructions about next steps.
- After your follow up appointment/cycle review appointment to check on your wellbeing and provide timing updates.
- At your day of insemination.

Embryologists

We're a dedicated team of scientists who specialise in the nurturing of eggs, sperm, and the creation of embryos. The laboratory is a strictly controlled environment where we care for your precious embryos using premium quality equipment. Our quality control systems and identity cross-checking are accredited annually to maintain the highest international standards. Our embryologists include some of the most experienced in the country and continuously strive to provide you with techniques that are at the forefront of evidenced based science.

When you'll see us

- Pre-treatment for organising a semen analysis.
- Day of semen sample production.
- Day of egg collection to explain the plan we will be following in the lab, and after the egg collection to update you on the quality and quantity of the eggs and sperm.
- For 6 days following the egg collection, we will call you regularly to update you on the fertilisation, embryo development and possible embryo freezing options.
- After Day 6 we will send you a laboratory summary via email so that you have a record of the outcome of your embryo culture. If you have any concerns or questions, we encourage you to contact us by phone or email. We aim to reply to voicemail and emails within 24 hours.

Reception

We're here to help you with whatever you need. We aim to book you with the doctor that best meets your needs, at a time that fits your availability. We really care that your phone enquiries are transferred to the most helpful staff member.

When you'll talk to us

- As your first point of contact for any queries.
- Scheduling appointments with your doctor or counsellor.
- Checking into the clinic for appointments and treatments.
- If you have a question about your accounts.

CONTACT INFORMATION

RECEPTION

Hours Weekdays 8.30am – 5pm
Weekends 9am – 1pm

Phone 0800 483 105
or 09 524 1232

Email info@repromed.co.nz

ACCOUNTS

Phone 09 524 1232 and select 'appointments and general enquiries' option

Email info@repromed.co.nz

NURSES AND DOCTORS

Hours Weekdays 9am – 4.30pm
Weekends 10am – 1pm

Phone 09 524 1232 and select 'nursing' option

Email nurses@repromed.co.nz

LABORATORY

Hours Weekdays 10am – 3pm

Phone 09 524 1232 and select 'laboratory' option

Direct Dial 09 524 1231

Email labs@repromed.co.nz

COUNSELLORS

Hours By appointment

Phone 09 524 1232 and select 'appointments and general enquiries' option

Email info@repromed.co.nz

CLIENT FEEDBACK AND COMPLAINTS

Phone 0800 483 105
or 09 524 1232

Email quality@repromed.co.nz

Client Feedback Survey

Contact

Out of hours emergency contact

In the event of a medical emergency, contact your nearest hospital Accident and Medical department, or ring 111.

If you have any severe pain or bleeding, go immediately to the hospital Accident and Emergency department, then contact the Repromed nurses to let us know within work hours. Please remember to take with you your discharge letter from us so the hospital staff know what recent procedures you have had, and who to contact here at Repromed for continuity of your care.

If you have an urgent enquiry related to your treatment outside of normal clinic hours, please call 09 524 1232. A recorded message will give you the mobile phone number of the doctor on call.

Ovarian Hyperstimulation Syndrome (OHSS)

If you have any concerns that you may be developing OHSS symptoms during work hours, contact the nurses and they will arrange for you to have blood tests that will help in the diagnosis of the condition. Rest and taking time off work can help you avoid hospitalisation. If after hours, ring the main number 09 524 1232 and you will be informed of the on-call Repromed doctor to contact.

Acute mental health out of hours contact

Adult Mental Health Crisis Team

For mental health emergencies in Central Auckland call 0800 800 717

Please check your local DHB Mental Health Crisis Team website for contact details in other regions.

Consents and payment

Informed consent: Making decisions about your treatment

Undergoing treatment is an involved process that requires you to make decisions about several key aspects before you start. To make these decisions, it's very important that you fully understand the procedures, risks and likelihood of success. We'll provide you with the relevant information and offer you unlimited opportunities to ask questions before you sign the consent forms.

Everyone undergoing treatment signs a common Consent Form. These forms are valid for a maximum of 12 months regardless of how many treatment cycles are undertaken within that time. The exception to this is any donor related treatment forms, which must be signed for each individual procedure. Consent Forms must be signed by both partners (where applicable) with one of the Repromed staff before treatment commences. Where there are additional aspects involved such as the use of donor sperm, donor egg, donor embryos or surrogacy, supplementary Consent Forms that cover these specific cases will also be signed. You have a right to a copy of any signed consents.

At the time of each treatment cycle, your doctor will also discuss your treatment management plan. In addition, you'll be required to sign a Contract of Care, acknowledging the legislative and regulatory requirements of sharing your information with other healthcare providers, and external auditing bodies for the NZS 8134 Ngā Paerewa Health and Disability Services Standard.

Repromed is also required to report on the outcomes of treatment to the Australian and New Zealand Assisted Reproduction Database (ANZARD). The information we collect will be stored in your Repromed records and shared with ANZARD.

NOTE

You are required to complete and return your consent forms to the nurses prior to book on or at the latest Day 1 of your cycle.

GOOD TO KNOW

CLIENT ACCESS TO OWN HEALTH RECORDS

As a client you have a right to a copy of your own health record. If you request your records, you will be requested to sign a release consent, whether it's for your own personal records or for a third party. It will take a minimum of 10 working days to provide a copy of health records.

Payments

The costs for appointments and treatments are available on the Repromed website and provided as part of your journey planner pack of information at your first clinic visit.

When appropriate treatment has been decided, staff are available to discuss the costs in detail with you. You may choose to do this before you make your decision, when raising questions regarding your treatment, or at any later date.

The treatment costs are updated annually on the 1st April but are subject to change without prior notice.

NOTE

Once your treatment medications have been dispensed, the medications cannot be returned or refunded.

Payment timing

- Invoicing: You will be invoiced on Day 2 of your cycle.
- Payment: You are required to pay your invoice in full by Day 6 of your cycle.
- Doctors' consultations are paid for on the day of the appointment.
- The invoice for all medications must be paid for at the time of dispensing.
- Please be aware if you have an external or out-of-town scan this is not included in the Repromed treatment costs and you will be invoiced by the provider directly.

If you have any issues regarding the payment of fees, please contact the administration/accounts department, phone 09 524 1232.

Cancellation costs

If your treatment is discontinued (cancelled) at some point during your treatment, a partial refund may be available. The common refund rates are included on the Cost Sheet and on the website.

GOOD TO KNOW

We accept Gem Visa with an option of spreading your fertility treatment costs across 18 months, interest free. Lending criteria applies, find out more on our Treatments and Cost page of our website, or speak to our reception team.

Everything you need to know about starting your journey at Repromed is in your consent forms, patient information sheets and available on our website at **repromed.co.nz/current-clients**

Investigations

Before you begin treatment, there are a number of investigative steps to take.

1 Testing your egg reserve with an Anti-Mullerian Hormone (AMH) blood test

To help determine ovarian reserve and response to ovarian stimulation we recommend that everyone over the age of 25 has an AMH blood test. AMH is a hormone produced by the ovaries and gives an approximate indication of the number of eggs in reserve. If your AMH is significantly above average it will help indicate the risk of ovarian hyperstimulation. AMH testing is used by the doctor to make a decision about the dose of FSH required to give the best ovarian stimulation for your treatment, and subsequently assist the doctor in implementing plans to minimise this risk.

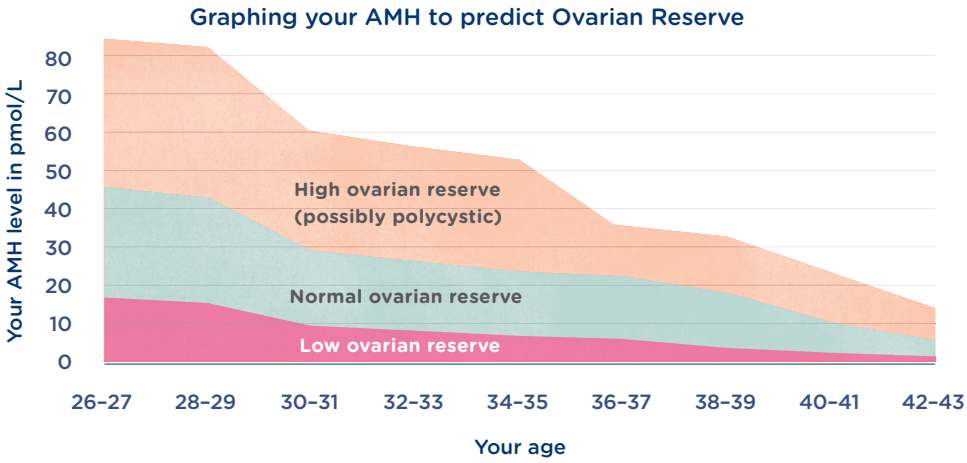
NOTE There is an additional charge for the AMH blood test.

AMH levels can be measured at any time of your menstrual cycle and most commonly in the units of pmol/L.

The graph over the page allows you to plot your results and see what range you fall into. For example, if you're 30 years old and have an AMH level of 50pmol/L (orange range), then this may indicate that you have signs of polycystic ovarian syndrome and require a reduced dose of FSH to stimulate your ovaries for treatment. If you're 35 years old and have an AMH of 22 pmol/L (green range) then you are in the normal range where your doctor is likely to prescribe a medium dose of FSH. A 38-year-old with an AMH of 4 pmol/L (red range) will require a larger FSH dose to optimise the ovaries response to stimulation medication.

GOOD TO KNOW

You will be required to have a smear test prior to treatment.



2 Fallopian tube test: Hysterosalphingogram (HSG)

Sperm needs to travel up the fallopian tubes to meet the egg as it is released during ovulation and to do this the tubes must be clear of obstructions. Sometimes the tubes can get blocked with scar tissue after an infection causing blockages. Before undergoing IUI treatment, it is necessary to ensure the fallopian tubes are clear and normal by carrying out a Hysterosalphingogram or HSG for short. This test is approximately a 45 minute procedure carried out by a radiologist at a private or public hospital radiology department. It involves a small tube being inserted through the cervix and into the uterus where a dye is injected into the fallopian tubes. The entry of the dye into and out of the fallopian tubes is visualised by taking an Xray which is then assessed by the radiologist for any blockages. Note that should a blockage be detected, then IUI may not be a suitable treatment option for you.

3 Screening blood tests

As part of looking after the welfare of the potential child, Repromed is also required to screen both partners for infectious diseases, immunity status and other bloods that will build a picture for your fertility.

Blood tests for Hepatitis B & C, HIV, Syphilis, Rubella, Measles and Thyroid will be ordered prior to the commencement of treatment. Results of these tests may reveal medical conditions about yourself or your partner (if applicable) of which you weren't aware. Your doctor will discuss the results of these tests at a subsequent consultation. If an infectious disease test returns positive, a Repromed doctor will contact you personally to discuss the result. Please note that false positive results are not uncommon and a repeat test may be needed to confirm the result.

A true positive test result may be a notifiable disease. If you are aware that you have an infectious disease, it's important that you disclose this in your health questionnaire, so that additional precautions can be taken in the laboratory to safeguard samples and staff.

Preparing for treatment

GETTING READY: PREPARING FOR YOUR TREATMENT

There are several health and lifestyle changes you can make that are proven to influence or enhance your chances of getting pregnant both prior and during treatment. (It is important to know that by the time you get referred for treatment, the cause of your subfertility or reduced fertility is usually out of your control.) Below is a brief overview, and more information can be found on our website, at: **repromed.co.nz/preparing-for-treatment**

PHYSICAL FITNESS: A HEALTHY BODY CAN HELP

For publicly funded treatment, the female Body Mass Index (BMI) must be less than 32 and the male BMI, less than 40 (please note this gendered language used and criteria is set by the New Zealand Government). People who are excessively thin or overweight have a significantly lower pregnancy rate and a higher miscarriage rate, compared to people in their healthy weight range. Research indicates that obesity has a significant impact on the chance of conception by reducing the count and structure of sperm, as well as decreasing ovarian function.

DIET: PAY ATTENTION TO WHAT YOU EAT AND DRINK

To improve your chances of conceiving, it's important that you and your partner (if applicable) try your best to eat a healthy, balanced diet. This will help you both maintain a good sense of overall wellbeing, and nutritious wholesome foods can markedly boost your fertility. Eating foods rich in antioxidants have shown to improve sperm quality by reducing the damage caused by free radicals. A healthy, balanced diet high in antioxidants is advisable for both partners and can be obtained from eating ample amounts of fruits and brightly coloured vegetables.

SUPPLEMENTS: GIVE YOUR BODY A BOOST

It is strongly recommended to consume an adequate amount of folic acid, iodine, and iron prior to and during pregnancy. Although many foods naturally contain these nutrients, the daily requirements increase substantially during pregnancy. That's why supplements may be recommended to ensure your intake is sufficient during treatment. On our website you'll find a list of common medicines or supplements you may be recommended to take: **repromed.co.nz/preparing-for-treatment**

EXERCISE: MODERATE MOVEMENT FOR YOUR BODY AND MIND

During your treatment cycle, you can maintain regular low impact exercise. Reduced fertility and subsequent treatment can both result in increased stress levels, so activities like yoga, regular walking, pilates (low impact), meditation and outdoor activities are encouraged. Higher impact sports such as netball, soccer or cycling may be more challenging on your body during your treatment cycle. Listen to your body and only do as much as you feel comfortable with. If you're not sure about your exercise regime, please ask us.

RECREATIONAL STIMULANTS AND MEDICATIONS: GIVE YOUR BODY A BREAK

Try and think of the time you are trying to conceive as your pregnancy training time. For the best chance it is recommended you:

- Quit smoking and vaping.
- Don't take recreational drugs.
- Reduce caffeine to a moderate intake level.
- Limit alcohol intake as much as possible.
- Check with your doctor before starting new medications.

WORK: AIM FOR BALANCE AND LIMIT STRESS

Many people ask if they should consider not going to work during phases of treatment. Our recommendation is to avoid, where possible, any activities that you find stressful, so if you find being at work stressful then the answer is 'yes'. If not, then continue life as per usual, aiming to avoid any undue stress. If you are undergoing an IVF/ICSI cycle, you will need to take off work the day of egg collection and the day after to recover from the procedure.

GENETIC SCREENING

Genetic screening is a pre-treatment option to test for a range commonly inherited genetic conditions including Cystic Fibrosis (CF), fragile X syndrome (FXS) or spinal muscular atrophy (SMA). The test is a saliva sample which is sent to Australia for testing, results take approximately two weeks. Your doctor will recommend this test if they think it's required, or you have a family history of any of the three conditions. It is advised that you are tested and if any of the conditions come back positive for the inherited gene, then your partner would require testing too, if applicable.

EMOTIONAL SUPPORT: WE'RE HERE TO HELP

Fertility uncertainty and treatment can be stressful and caring for your emotional and physical wellbeing is crucial during this time. Most people undergoing fertility treatment experience a range of emotions including frustration, sadness, guilt, and envy. The feelings can be quite intense

and may lead to a sense of lack of control in your life and even isolation. They can put a strain on relationships with partners, friends, whānau, and colleagues.

We believe that understanding your feelings can help during treatment and in fact, at any stage in your fertility journey. Here are some of the ways our experienced counsellors can help:

- Preparing you for treatments by exploring options, implications, providing coping strategies and practical resources.
- Supporting you during difficult times when dealing with the emotional impact of treatment.
- Supporting you during decision-making regarding treatments and endings.

GOOD TO KNOW

Counselling is available to all Repromed clients, and initial sessions are included in most treatment cycles (except OI). If you're undergoing an IVF/ICSI cycle, you'll have two counselling sessions included in the cost of your treatment. You can speak to our reception staff to make a counselling appointment. If your counselling needs are more urgent, please speak to one of our nurses who will help arrange an appointment for you. We encourage you to access this service as an important part of your self-care. Whānau involvement in the counselling process is greatly welcomed.

WE'RE WITH YOU AT EVERY STEP

The treatment process can feel long and frustrating, particularly when you're feeling pressure from your biological clock. It is about achieving a series of milestones and quietly celebrating positive results as you progress toward your goal of taking home a healthy baby. Nothing is certain and you may be thrown a few curveballs along the way that you weren't expecting. Everyone in your Repromed team is here to support you and we're always happy to talk about any issues along the way.

FERTILITY NEW ZEALAND

Fertility New Zealand is a charity dedicated to providing information, support and advocacy to New Zealanders facing fertility challenges. They can help with educational information and videos, coffee groups, one on one support, and meetings. In Auckland, Fertility New Zealand also has several sub-groups which can help link you with other people who will share many similar experiences to yourself.

It is free to join Fertility New Zealand. Find out more and join at **fertilitynz.org.nz** or call 0800 333 306.

All about sperm

GETTING YOUR SPERM READY

Did you know that it takes around three months for sperm to mature in the testes before they're ready to successfully fertilise an egg?

During this time your health can affect your sperm quality. Exposure to substances such as recreational stimulants/drugs, some medications, and toxic chemicals (like solvents and industrial agents) may also adversely affect the health of your sperm during those three months of maturation. Minimising the cell phone storage in your trouser pocket and use of laptops on your lap will help to reduce the exposure of your testes to radio frequencies and electromagnetic fields which may impact on sperm function.

It's important to try to avoid these kinds of substances or activities in the months leading up to and during fertility treatment to ensure your sperm have the best possible chance to achieve successful fertilisation. It's a good idea to discuss any specific queries or concerns that you have about this with our doctors, especially about any medication being taken or illnesses in the previous 90 days.

THE FIRST STEP: SEMEN ANALYSIS

Before any fertility treatment, you'll be asked to have a semen analysis performed at Repromed's laboratory or Awanui Labs. This will ensure all the specialist tests have been conducted and that they have been carried out using the World Health Organization guidelines and Strict Morphology testing.

THE NEXT STEP: ABSTINENCE

To provide the best sample possible, we ask you to abstain from ejaculation for two days prior to treatment. Longer intervals of abstinence of up to five days may result in more dead or expired sperm being present which will bring the percentage of motile (moving) sperm down in the analysis results. And less than two days abstinence may reduce the total concentration of sperm.

GOOD TO KNOW

Please avoid lubricants, including saliva and soap, as they can affect sperm quality. You can minimise the chance of contamination by ensuring you wash your hands thoroughly before producing the sperm sample.

PRODUCING YOUR SAMPLE

Partners of those undergoing treatment (and not using donor sperm) will be asked to produce a sample at a specified time, usually an hour after the egg collection for those undergoing IVF/ICSI, or two hours before the planned insemination for those undergoing IUI.

To ensure the freshest semen sample is available for your treatment it is important that we begin processing the semen sample within one hour of it being produced by masturbation. Most clients use our private room, which is equipped with magazines, videos and wifi. However, if you live in close proximity to the clinic (within 30 minutes drive), it may be possible to produce the sample at home as long as the time has been arranged with the laboratory staff.

It's important to get as much of the ejaculate into the pot as possible as often the highest concentration of sperm is in the first portion, so please let the embryology team know if it wasn't complete so that this can be taken into consideration.

WHAT IF I CAN'T 'PERFORM' ON THE DAY?

We recommend that you discuss any potential difficulties that might affect you producing the sample with a nurse or your doctor prior to the day of treatment, as there are a few options available to make you more comfortable, such as:

- Your appointment time can be somewhat flexible.
- If it helps, your partner (if applicable) can be with you at the time you produce your specimen. We can provide special condoms if you need to have intercourse to produce a specimen, at an additional cost.
- If a lubricant is required, then please discuss this with the clinic staff and they can advise you which ones are safe to use.
- The specimen can be produced away from the clinic and brought in, provided the sample is maintained at, or slightly below, body temperature and reaches the clinic within approximately half an hour of production. Please note that this must be in a sterile container provided by the clinic.
- It may be possible to freeze semen prior to treatment, however, the quality of the sample may be compromised after thawing and not all samples are suitable for freezing. This needs to be discussed well in advance of your treatment cycle. Please note, for those undergoing IUI there is an additional cost for this.

ALL ABOUT SEMEN ANALYSIS

The routine semen analysis measures your sperm count, motility (movement), morphology (shape and size of the sperm cells), antisperm antibodies, as well as the volume and pH of the ejaculate. The chart on the next page shows the criteria we use to assess semen, and the normal ranges.

Parameter	Explanation	Normal values
Volume	Amount of fluid in the complete sample	Greater than 1.4mL
Concentration	Number of sperm in every millilitre	Greater than 16 million/mL
Motility	Percentage of sperm moving forward	Greater than 30%
pH	Scale of acidity and alkalinity	Greater than 7.2
MAR test	Antisperm antibody testing	Less than 40%
Strict Morphology	Percentage of sperm with normal shape and structure	Greater than or equal to 4% normal

WHAT IF MY SAMPLE IS UNEXPECTEDLY LOW QUALITY ON THE DAY OF EGG COLLECTION OR INSEMINATION?

Very occasionally we might ask you to produce a second sample on the day of treatment if there are unexpected concerns about the quality of your sperm – and often the second sample is much improved.

The embryologists will assess the quality of your semen sample on the day of treatment. If you're undergoing an IVF/ICSI cycle, we will consult with you about the best method of fertilisation (IVF or ICSI) before you go home. In some cases, a change in plan from IVF to ICSI or vice versa may be recommended and consent to any additional costs will be obtained after full discussion with you. For those undergoing IUI, if for some reason your insemination does not proceed you may be entitled to a partial refund.

GENETIC TESTS FOR SPERM

SPERM DNA FRAGMENTATION TESTS (SCSA)

The genetic health of the sperm is essential for normal embryo development. However, conventional sperm analysis tests can't detect sperm where the DNA strands have been broken down into pieces (DNA fragmentation).

Evidence shows that high levels of DNA fragmentation in the sperm could affect the chances of pregnancy with IUI, IVF and ICSI and result in higher miscarriage rates. That's why sperm DNA testing helps us guide clients on their future treatment plans.

GOOD TO KNOW

If you have low sperm count, we can often find sperm to use with microinjection technology (ICSI). If there is no sperm present, for some people we can take (under local anaesthetic) a small sample from testes to extract sperm (TESE, or TESA), which can either be used fresh on the day of egg collection or frozen for later use.

We understand that this process is highly personal and at times may be difficult. Please don't hesitate to contact Repromed with any concerns you may have.

NOTE

Our counsellors are available for supporting and providing coping strategies for anyone diagnosed with sperm related infertility.

Intrauterine insemination (IUI) treatment and process

YOUR TREATMENT PLAN

You'll meet with your Repromed fertility doctor, who'll discuss your recommended treatment plan based on your individual situation. This will be followed by an orientation appointment with the nurse who will explain your chosen treatment plan and detail blood tests, scans, medication and treatment timings. You'll be required to review and sign consent forms before you start your treatment. A nurse will discuss this with you in detail throughout the process.

OVARIAN STIMULATION AND MONITORING

Some IUI cycles require ovarian stimulation medication to produce one or more eggs. There are several different ovarian stimulation medications available and your doctor will choose the one that is best for your menstrual cycle profile.

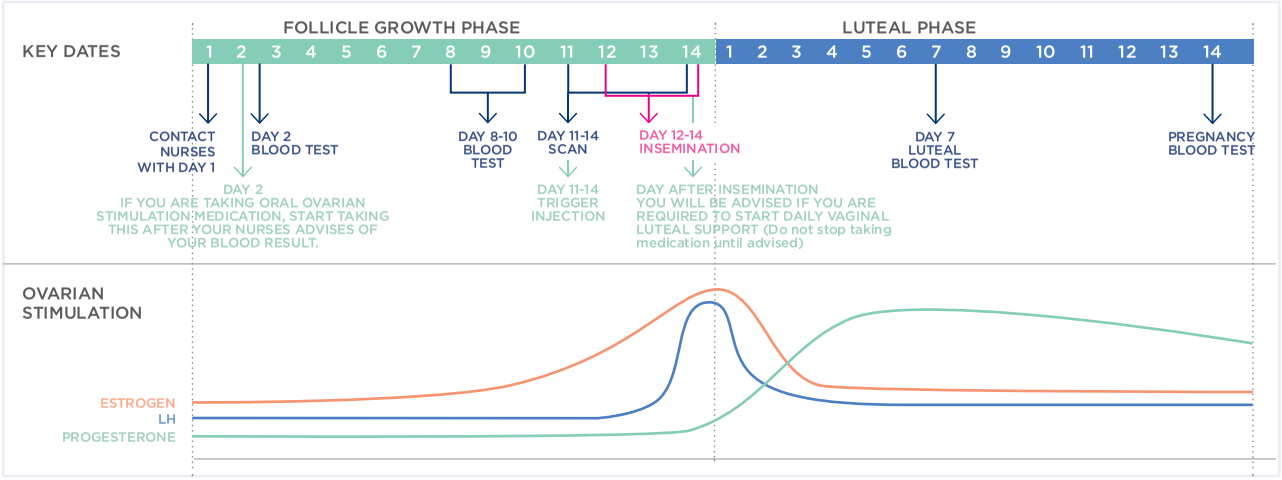
The table on the next page provides you with an overview of each of the medications and how they operate during the three common phases of ovarian stimulation. Please use it as a reference as you are going through treatment. The colour coding is to help identify the different phases throughout your treatment and correlates with the overview of your cycle image on the following page.

	Stimulation	Trigger	Support
Examples of hormone medication used	• Letrozole • Clomiphene	• Ovidrel (if required)	• Utrogestan (Progesterone) • Crinone (Progesterone)
What they do	These act on the ovary directly to stimulate the growth of follicles. They mimic the natural hormone called FSH (Follicle Stimulating hormone).	These cause the follicles to begin the ovulation process which takes 36 hours.	These support a healthy level of hormones in the uterus for embryo implantation to occur and maintain a pregnancy if required.
Why they are used	Encourages the growth of 1-3 follicle(s) where necessary.	Allows more precise timing of the insemination. During this time the eggs will begin their final maturation process so they are ready for fertilisation.	Some people may have a low luteal phase Progesterone which requires additional support through administration of these hormones.
How are they used	These are tablets which are taken orally for 5 days from Day 2-6 or 3-7 of your cycle.	Ovidrel contains the pregnancy hormone hCG which acts directly on the follicle.	• Utrogestan and Crinone are both inserted into the vagina • Utrogestan - is given as two pessaries, three times per day • Crinone applicator gel once a day

SCHEDULING YOUR TREATMENT

1. Visit the Repromed doctor and nurse for treatment orientation and a discussion around starting time.
2. Email the nurses on the first day of your period during the month of your planned treatment.
3. The first day of a period is full flow bleeding prior to 12pm e.g. a period at 7pm on Saturday will mean ‘Day 1’ of your cycle would be Sunday.
4. When you email the nurses include your full name, date of birth and telephone number. The nurses will ring you back to book you on for your treatment.

IUI CYCLE OVERVIEW



Please note this is a simplified Intrauterine Insemination overview. You will receive a personalised cycle plan tailored to your specific needs.

This picture provides an overview of what is going on inside your body during the 28 day menstrual cycle during your treatment cycle. The various tests and procedures during the treatment cycle are overlaid to give you an idea of the timeframes and phases. Your IUI cycle is split into three phases:

1. Follicle growth phase approx. 12 days.
2. Ovulation phase 36 hours post trigger.
3. Luteal phase approx. 12 days which results in a 28-day cycle.

The main difference between a treatment cycle and a regular menstrual cycle is that we monitor the growth of your follicle(s) with blood tests and a scan so that we can either know when ovulation will occur or induce it with a trigger injection. In this way we can time the insemination so that it coincides with the release of your egg(s). Some people undergoing IUI, will take ovarian stimulation medication to initiate the growth of 1-3 follicle(s) from Day 2 to Day 6 of the cycle (5 days).

STEP BY STEP THROUGH YOUR CYCLE

Day	What happens with an IUI	What you need to do
1	The first day of your period (full flow before midday) is when you book on by emailing **nurses@repromed.co.nz** Please write your full name, date of birth, phone number and a nurse will call you back to confirm your details and book you on.	Email **nurses@repromed.co.nz**
2-6	If you are taking ovarian stimulation medication (Clomiphene or Letrozole) then today you will start these, for 5 days. Please take it at night time.	Follow nurses instructions for taking any stimulation medication which they will go over when they call, text, or email you back to book you on.
10-12	Monitoring of your follicle growth will start with measuring estrogen (E2) and Luteinising hormone (LH) in your blood tests. Your blood results are reviewed every afternoon by our team and a plan is made for the following day. The nurses will contact you in the afternoon to give you an update on your blood results and inform you what to do next.	Follow the nurses instructions and when to have blood tests.
10-14	When the estrogen levels indicate there is a follicle, an ultrasound scan is performed to monitor the size and number of your follicle(s). Based on the scan and blood test results, we will optimise and plan the insemination by either: a) observe ovulation with your blood results OR b) give you a trigger injection to stimulate ovulation.	Take the trigger injection if applicable at the time instructed.

Table continued on next page

Day	What happens with an IUI	What you need to do
Insemination Day	The laboratory starts preparing the sperm two hours before the insemination. The insemination is carried out at Repromed usually by one of the nurses in a procedure that is similar to a smear test. Your doctor may recommend you take luteal support medication to raise the hormone levels in your uterus that support embryo implantation (if required).	Your partner produces a semen sample two hours before the planned insemination, either at home dropping it in two hours before or here at the clinic. Come to Repromed at the planned time for your insemination with a part full bladder. Take luteal support medication if recommended by your doctor.
7 days after insemination	At this point of your luteal phase, the hormone Progesterone should be at a certain level to prove ovulation and support the lining. This can be measured by a blood test.	Take a blood test for Progesterone as instructed by the nurses.
14 days after insemination	This is the day you will find out if you are pregnant. You may have already started to bleed if you are not pregnant. The counsellors are available as you may need to be supported if the news is not good.	Go for a blood test when directed by the nurses. Plan how, when and where you wish to receive this news.
If you are pregnant	Your pregnancy will be monitored with blood tests at Repromed until week 7 where you will have a pregnancy scan to check for a heartbeat. After this time you will be handed over to your choice of Lead Maternity Carer (LMC) for the rest of your pregnancy. So please choose early whom you want to take over your care, don't wait until after the 7 week scan.	Follow the nurses instructions. Find a Lead Maternity Carer before your 7 week scan as you will be discharged from Repromed care at this time.
If you are not pregnant	You may go directly into another treatment cycle if there is availability to do so. The nurses will discuss if you want to start another cycle which is recommended by your Repromed doctor in lots of three. If you are not pregnant after another three IUIs you would have a free cycle review appointment about what to do next.	The nurses ask if you want to have contact from one of our counsellors if you need to seek support during this difficult time.

TREATMENT

Monitoring your cycle and response to the stimulation hormones

Blood tests and vaginal ultrasound scans will be scheduled to monitor your cycle and the response to any ovarian stimulation medications you may be given. As the follicle(s) grow they produce estrogen, which can be measured in the blood. We expect the level of estrogen to correspond with the number and size of the follicles. In an average cycle, you will have 3-7 blood tests and possibly one scan.

Scanning involves a small ultrasound probe, covered with a condom or latex free glove if indicated, being placed in the vagina, enabling ultrasound waves to image the number and size of the ovarian follicles. An empty bladder is required. The scanning procedure usually only takes a few minutes. Your second scan or trigger scan must be done at Repromed, this cannot be done out-of-town.

The Repromed clinical staff discuss the blood and ultrasound results each day at a midday meeting and decide on any medication dose adjustments and the timing of treatment. Nurses will contact you later in the afternoon of that day if the instructions/plans change otherwise the agreed instructions/plans will be continued.

The luteal phase

Your doctor may recommend that you take medications to boost the Progesterone levels to improve the uterine lining for implantation, although with an IUI cycle this is rarely needed. A blood test will be done 7 days after insemination to check Progesterone levels. The nurses will inform you if it confirms ovulation.

PREPARING THE SPERM SAMPLE

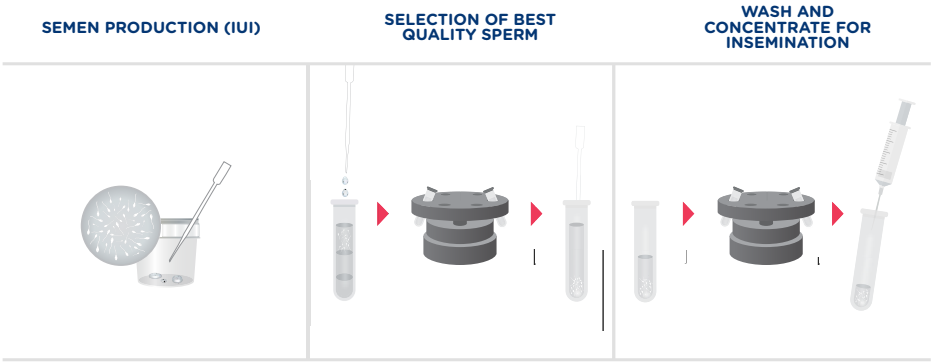
Producing the sperm sample

The majority of IUI cycles use fresh sperm provided on the day of the insemination. However there are options available such as using backup frozen sperm in cases where the partner has difficulty producing the sperm or may not be in the country at the time required. Partners of those undergoing IUI treatment will be asked to produce a sperm sample in Repromed's private room after abstaining for 1.5 to 2 days (see previous all about sperm section).

Laboratory preparing the sperm for insemination

It doesn't matter the origin of the sperm – fresh or frozen – the preparation is the same for all. Refer to the diagram over the page for a visual explanation of this process. It takes about two hours to wash the sperm in a process where the sperm is separated out from the seminal fluid. The sample is placed on top of a graduated thick solution in a tube which is spun down in a machine that separates out the high from the low quality sperm. This is repeated several times to ensure that the final sample is as pure as possible ready to be placed inside the uterus. The high quality sperm is concentrated down to just a few drops, then counted so that the concentration is known. A minimum of 2 million motile (moving) sperm is used for all inseminations.

THE SPERM PREPARATION PROCESS



TIMING YOUR INSEMINATION

Your blood tests and ultrasound scan will indicate when your eggs are ready for ovulation. You'll be advised about the timing of your insemination. A trigger injection may be given to time your insemination to ensure ovulation has occurred. Alternatively, the time of ovulation may be predicted from the results of your blood tests, then timed intercourse or insemination is planned. If you are required to have a trigger it is important that you give this injection at the precise time the nurse instructs.

Preparing for your insemination day

- You'll need to arrange to have a minimum of one hour off work.
- Your partner (if applicable) or a support person is welcome to attend the insemination procedure.
- If planning to use fresh semen sample on the day (IUI), your partner will also need to arrange time off work as they will need to provide a sperm sample at least two hours prior to the insemination time.
- You will need to have a half full bladder for the procedure and the nurse will advise you on how best to achieve this.
- For those that have children, please note that they are only permitted in the waiting room and not in the treatment areas, so you may wish to arrange childcare on the day of insemination.

When and where to go for the insemination

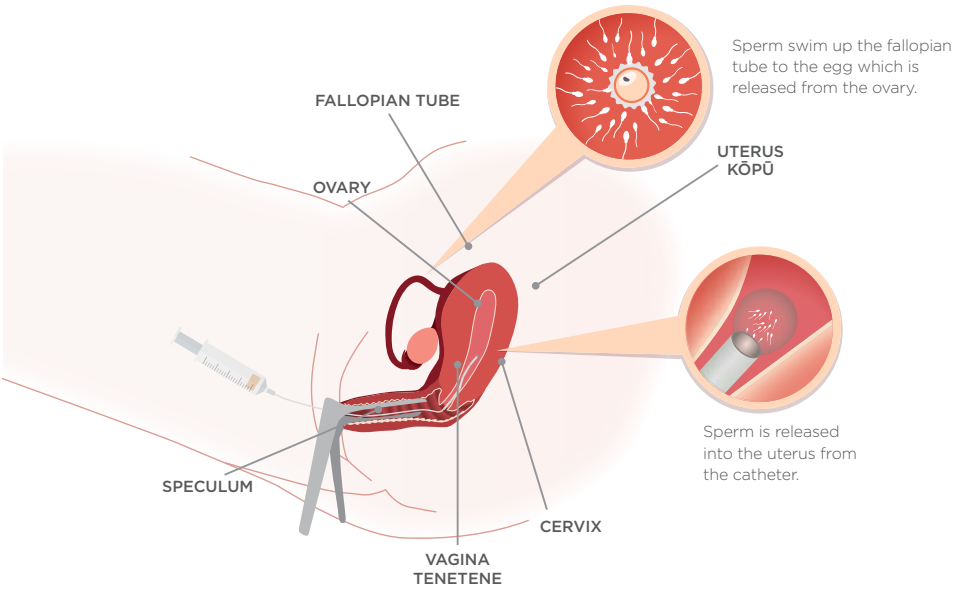
Plan to arrive at Repromed 10 minutes before your insemination. Please report to reception and take a seat in the waiting room until a nurse comes to greet you.

The insemination procedure

The insemination procedure is very similar to having a smear test. Once the nurse has checked your ID, you will be asked to place a sheet over the lower half of your body while on the procedure bed. A speculum is inserted into your vagina to locate the cervix. The sperm sample is drawn up into a very fine catheter which the nurse inserts through the cervix and up into the uterus where the 0.5 ml sample is expelled. You will then stay lying down for 5-10 minutes before you are free to go.

Do not be concerned if some fluid is discharged after the insemination as this is your normal mucus that is present around ovulation. The sperm is safely enclosed in the uterus and will not fall out!

THE INSEMINATION PROCEDURE DESCRIBED IN CROSS SECTION VIEW



PREPARING FOR YOUR PERIOD AND/OR PREGNANCY TEST

You will be advised by a nurse to go for a pregnancy blood test. Waiting for your period and/or confirming the result of your pregnancy test during fertility treatment can bring with it a mix of emotions from excitement to anxiety. Maintaining optimism yet being prepared for different outcomes may be challenging.

Keep in mind your hormones may also dictate fluctuations of mood and resilience over this time. Plan to take some time for yourself and also spend time with your partner or friends. Plan an activity which you know makes you feel good and can provide a happy distraction. The nurses usually make the pregnancy test calls early in the afternoon.

Putting some prior thought into how you would like to receive the results of your pregnancy test may help you manage this situation in a way that fits you best.

- You might want to think about whether you want to be at home when you receive the call.
- You may want someone to be with you for support.
- You may want someone else to take the call for you.
- Please note we do not text or email pregnancy results.

Positive pregnancy test

At the time of your first pregnancy test, you will be just four weeks pregnant, as pregnancy dates are calculated from the first day of your last period or 14 days post ovulation.

A pregnancy scan is done at 7-8 weeks gestation (although those at higher risk of ectopic pregnancy will be scanned around six weeks gestation). The scan will show if the pregnancy is viable (a heartbeat can be seen), how many fetal sacs are present and whether the fetal sac is within the uterus.

Once a viable, ongoing pregnancy has been seen after the 7 week scan you will be referred to the Lead Maternity Carer (LMC) of your choice for your pregnancy management as you will be discharged from Repromed care.

Negative result

If the pregnancy test is negative a nurse will ring and advise you of the appropriate course of action. Negative results and pregnancy loss is a time of great distress and is heartbreaking for us all. The team is here to support you through this. You can contact us at any time for counselling support.

Cycle review

A free doctor's review appointment is recommended after three unsuccessful cycles.

IVF treatment and process

YOUR TREATMENT PLAN

You'll meet with your Repromed fertility doctor, who'll discuss your recommended treatment plan based on your individual situation. This will be followed by an orientation appointment with the nurse who will explain your chosen treatment plan and detail blood tests, scans, medication and treatment timings. You'll be required to review and sign consent forms for your treatment. A nurse will discuss this with you in detail throughout the process.

OVARIAN STIMULATION AND MONITORING

Controlled ovarian stimulation to produce multiple eggs is the cornerstone of an IVF cycle. There are several different protocols of ovarian stimulation available and your doctor will choose the one that is best for your menstrual cycle profile and personal circumstances. All of the protocols have common features, so to explain how they work we have broken the key aspects of how they work into four simplified phases:

- Control
- Stimulation
- Trigger
- Support

The table below provides you with an overview of each of the medications and how they operate during the four common phases of ovarian stimulation. Please use it as a reference as you are going through treatment. The colour coding is to help identify the different phases throughout your treatment.

	Control	Stimulation	Trigger	Support
Examples of hormone medication used	• The Pill • Buserelin/ Suprecur (injection) • Synarel (nasal spray) • Orgalutran • Cetrotide	• Elonva (single dose) • Puregon (multi dose) • Gonal F (multi dose) • Menopur (multi dose)	• Ovidrel • Buserelin / Suprecur • Decapeptyl	• Utrogestan (progesterone) • Crinone (progesterone) • Estradiol Valerate (estrogen) • Duphaston (progesterone)
What they do	These work to either quieten ovarian activity or to prevent the follicles from ovulating.	These act on the ovary directly to stimulate the growth of follicles. They mimic the natural hormone called FSH (Follicle Stimulating hormone).	These cause the follicles to begin the ovulation process which takes 36 hours.	These support a healthy level of hormones in the uterus for embryo implantation to occur and maintain a pregnancy.
Why are they used	• To allow your cycle to be planned for a specific week. • To provide a more uniform growth of follicles. • To prevent premature ovulation.	Encourages the growth of all available follicles for that month.	To accurately time the egg collection procedure. During this time the eggs will begin their final maturation process so they are ready for fertilisation.	The follicle stimulation phase produces much higher levels of hormones than in a natural cycle. This can lead to an imbalance of hormones which need to be corrected by the addition of these support medications.

Table continued on next page

	Control	Stimulation	Trigger	Support
How are they used	• The Pill (orally). • Buserelin/ Suprecur (injection) or Synarel (nasal spray) are given before the stimulation is started. • Orgalutran (injection) is given during the stimulation phase. • Cetrotide (injection) is given during the stimulation phase.	These are administered by injection from the beginning of the treatment cycle i.e. Day 2–3.	• Ovidrel contains the pregnancy hormone hCG which acts directly on the ovary. • Buserelin is administered when there is an OHSS risk and a Freeze Only option is recommended.	• Utrogestan and Crinone are administered into the vagina. • Duphaston is given orally. • Estradiol Valerate is given orally.

The two most commonly used ovarian stimulation protocols at Repromed are: Down Regulation and Antagonist. They differ in the medications that are used and also in the way they achieve the same result. The table below shows an overview of these two ovarian stimulation protocols. For both of these ovarian stimulation plans, the following information applies:

	Down Regulation Protocol	**Antagonist Protocol**
How many days from my Day 1 is the egg collection?	5 weeks from your Day 1.	2 weeks from your Day 1.
How many days of follicle stimulation?	9–12 days.	9–12 days.
What type of control medication?	**Buserelin** Taken for 21 days before stimulation treatment to down regulate the hormones/ ovary activity.	**The Pill (optional for planning)** Orgalutran or Cetrotide (Antagonist) taken for the final days before egg collection.
How many hours from the time I am triggered to the egg collection?	34–36 hours.	34-36 hours.
How many days from egg collection to embryo transfer or potential freezing?	3 to 5 days after egg collection. Potential freezing is usually performed 5 to 6 days after egg collection.	
What are the chances of me having a Freeze-Only cycle?	One third of clients have a Freeze-Only cycle where the transfer of high quality embryos are deferred until two periods after the egg collection. This has the benefit of ensuring the uterus and your health is optimal for successful embryo implantation.	
How long before I know if I'm pregnant?	If you've had an embryo transfer, you will need to have a blood test for the pregnancy hormone hCG 14 days after your egg collection.	
If I am not pregnant, how long before I can have further treatment, FET or IVF?	After a cycle review with your doctor you will be able to commence treatment again.	

SCHEDULING YOUR TREATMENT CYCLE

1. Visit the Repromed doctor for treatment orientation.
2. Let us know when it is convenient for you to start treatment (if this is a publicly funded cycle, the nurses will give you a planned month of treatment at your orientation appointment).
3. Call the nurses one month before your planned month of treatment to arrange a medication education session.
4. Visit the nurses for an injection education session. Note that this can also be done via Zoom or follow our easy teach video in English or Mandarin **repromed.co.nz/current-clients**
5. Email the nurses on the first day of your period during the month of your planned treatment.
6. The first day of a period is full flow bleeding prior to 12 midday e.g. a period at 7pm on Saturday will mean 'Day 1' of your cycle would be Sunday.
7. When you email the nurses include your full name, date of birth and telephone number. The nurses will ring you back to book you on for your treatment.

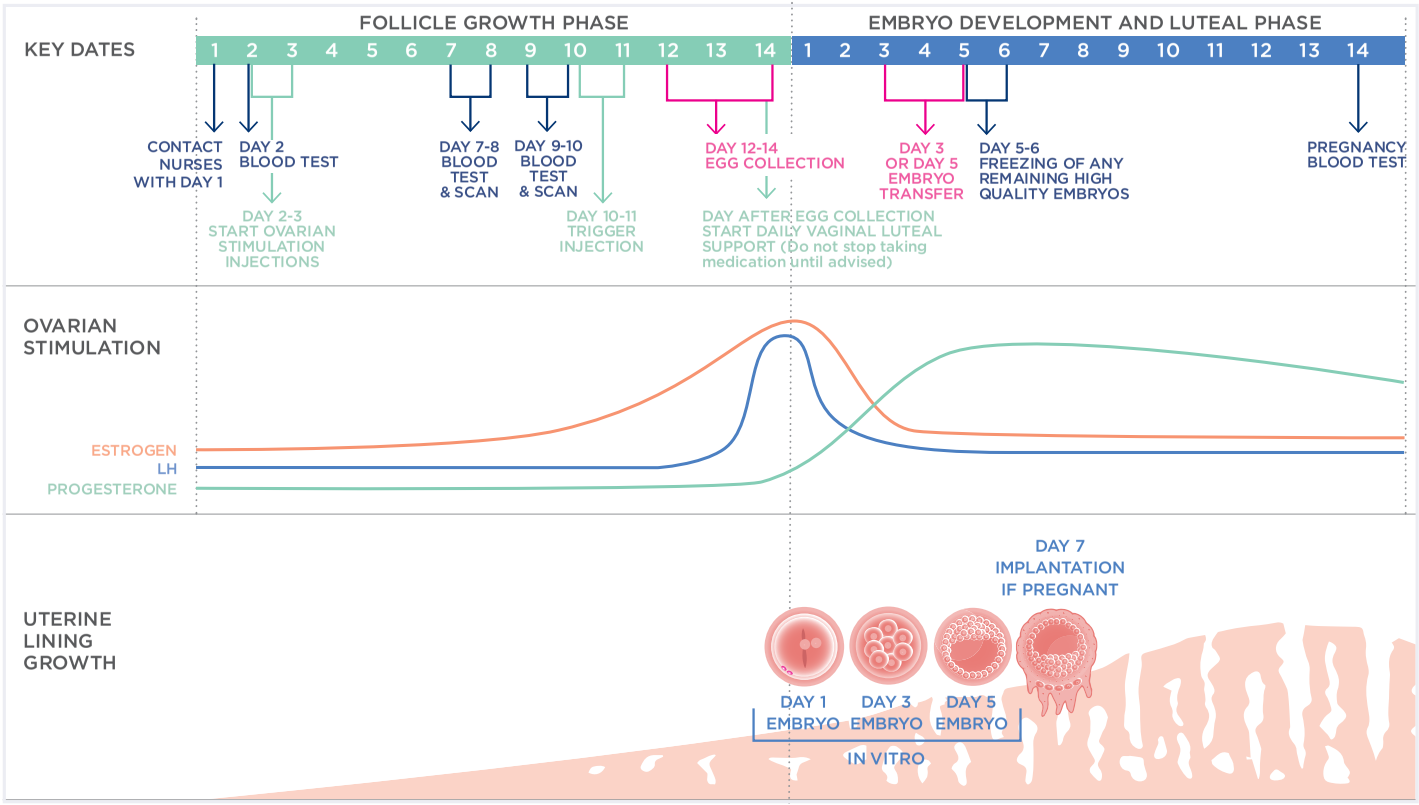
AN OVERVIEW OF YOUR IVF/ICSI CYCLE

The picture on the next pages provides an overview of what is going on inside your body during the 28-day menstrual cycle during your IVF treatment. The various tests and procedures during the treatment cycle are overlaid to give you an idea of the successive timeframes and phases. The main difference between an IVF cycle and a regular menstrual cycle is that ovulation doesn't take place during IVF. Your IVF cycle is split into two roughly equal 12–14-day phases – follicle growth and then embryo development phase, giving approximately 28 days for the full cycle. Your nursing team will be able to take you through the process in detail.

INFORMATION OVERLOAD?

Don't worry, our nurses are here for you every step of the way so there's no need to remember all of this information to have a successful cycle.

IVF ANTAGONIST CYCLE OVERVIEW



Please note this is a simplified IVF antagonist cycle overview. You will receive a personalised cycle plan tailored to your specific needs.

TREATMENT

Monitoring your response to the stimulation hormones

Blood tests and vaginal ultrasound scans will be scheduled to monitor your response to the stimulation to the medication. As the follicles grow they produce estrogen, which can be measured in the blood. We expect the level of estrogen to correspond with the number and size of the follicles.

Scanning involves a small ultrasound probe, covered with a condom or latex free glove if indicated, being placed in the vagina, enabling ultrasound waves to image the number and size of the ovarian follicles. An empty bladder is required. The scanning procedure usually only takes a few minutes. All IVF scans must be done at Repromed. For clients living outside of Auckland, the first blood test can be done through your local laboratory service and the result sent to us.

The Repromed clinical staff discuss the blood and ultrasound results each day at a midday meeting and decide on any medication dose adjustments and the timing of treatment. Nurses will contact you later in the afternoon of that day if the instructions/plan change otherwise the agreed plan will be continued.

It is best if you prepare yourself for all potential treatment outcomes. Your treatment may result in the following:

- Cancelled cycle before the egg collection if there are three or less follicles.
- Change of management for the prevention of OHSS resulting in a freeze only cycle.

Timing your egg collection

Your blood tests and ultrasound scans (approximately 10 days of stimulation) will indicate when your eggs are ready for collection. You'll be advised when to stop taking your stimulation medication and the timing of your egg collection will then be arranged. The trigger injection is given at a time of the night that corresponds to the egg collection being planned for 34–36 hours later at Repromed. This is Monday to Friday in the mornings between 7:30–10am. For example, a Wednesday 8pm injection would mean an 8am egg collection on Friday when a 36 trigger is used. It's very important that you give this injection at the precise time you have been instructed to.

NOTE **Do not eat or drink from midnight (or six hours minimum) before the egg collection.**

Your egg collection day

Getting prepared

- On the day of your egg collection we recommend that you shower at home before you leave and do NOT wear any perfume or deodorant (partners and support people included) as we aim to keep the air in the egg collection room as pure as possible.
- Do NOT eat or drink from midnight the night before the egg collection (this includes no chewing gum as this may fill the stomach with gastric juices).
- You'll need to arrange to have both the day of egg collection and the following day off work.
- Your partner (if applicable) or a support person must drive you home and remain with you for 24 hours.
- If you're planning to use a fresh semen sample on the day, your partner will also need to arrange this day off work as they will need to provide a sperm sample. (Note that this isn't necessary if you're using frozen samples or donor sperm).

- Our Health and Safety policy restricts us from having partners or a support person in the theatre room. Under exceptional circumstances this may be permitted so please discuss any concerns you have regarding this with your nurse or doctor.
- For those that have children, please note that they are not permitted in the treatment areas so you will need to make childcare arrangements for these important days.

When and where to go

Plan to arrive at Repromed one hour before your egg collection. Please take a seat in the waiting room on the ground floor until a theatre nurse comes to greet you. Just before the egg collection, an embryologist and doctor will talk to you to ensure that you are clear about what the procedure involves before signing the treatment summary.

What to expect on the day

Egg collections are usually performed under intravenous sedation using an injected medication that makes you feel sleepy and relaxed. The theatre nurse or doctor will insert a small cannula into a vein in your arm or hand to inject this medication during the egg collection. Be assured that the clinical staff do everything in their power to ensure any pain is minimised. You may be advised to have a General Anaesthetic due to difficult access to the ovaries or a strong indication that you may not be able to tolerate the procedure under sedation. You can discuss this option with your doctor if you have serious concerns about your ability to cope.

Egg collection overview

When all the necessary staff have talked to you, the theatre nurses will walk with you into the theatre, where you'll be assisted onto the bed. Your partner or support person is not able to accompany you into theatre, they will need to sit in the waiting room until you recover fully from the procedure which takes about an hour. Please note that all semi-surgical procedures such as egg collections are carried out in affiliation with Repromed's DAA accredited surgical unit ACSS (Auckland City Surgical Services) within the same building and using Repromed doctors.

The egg collection usually takes 10 minutes but can range between 5–30 minutes depending on how many follicles there are to retrieve and how easily the eggs come out. During the egg collection, your legs will be placed in stirrups and a speculum inserted into your vagina so that local anaesthetic can be given by the doctor to numb the region. The speculum is removed so that the ultrasound probe can be placed in the vagina.

Under ultrasound guidance, the doctor will pass the needle through the vaginal wall and into the ovary. The follicular fluid is then aspirated into a test tube and examined by the embryologist under a microscope to see whether an egg has been collected. It's important to know that often an egg is not recovered from every follicle. On rare occasions, no eggs are able to be collected.

The risks of surgical complications are small (about 1:1000 cases) and could include vaginal bleeding and pain; damage to blood vessels or surrounding organs and infection (see Possible Risks section for more information).

Recovery after the egg collection

You'll be in recovery for about one to two hours. Once you're fully awake, you'll be given a drink and light refreshments. During this time the embryologist will ask your partner (where applicable) to produce a sperm sample in Repromed's private room.

Once you're feeling well recovered, usually 1-3 hours after your egg collection, you can get dressed and a Repromed nurse will give you the next steps required for your cycle management. You will then be able to go home with your partner or support person who will be advised to care for you for the next 24 hours while you rest and have a quiet day.

We recommend that you plan for the following day off work. It's not unusual to feel quite tired the day after egg recovery due to the combined effects of the medication and the procedure, but most people find they feel only a little uncomfortable. Constipation and bloating is a common side effect, so it is important to increase your fluid intake to two to three litres per day to minimise symptoms and maintain adequate hydration. Some vaginal spotting or abdominal cramps may be experienced up to 48 hours after this procedure, which may be relieved through taking pain relief such as Paracetamol.

If you experience any heavy vaginal bleeding, pain, fever or Ovarian hyperstimulation syndrome (OHSS) please contact the nurses immediately during working hours. If it is after hours, please go to your nearest hospital Accident and Emergency department, then let the Repromed nurses know by leaving a message on the answer phone or by sending an email. Remember to take your discharge letter with you so that hospital staff are aware of your procedure and know who to contact for more relevant information.

IN THE LAB

Safeguarding your sperm, eggs and embryos

A very strict electronic witnessing system is utilised by Repromed that uses radio-frequency (RF) ID tags on every dish or device that your eggs, sperm and embryos are cultured in. The first RF ID tag is assigned to you at the start of the process and witnessed by two trained staff members to ensure all details are correct. Then at each step a new dish or device is used, the original ID will be used to assign the next ID tag. This system (RI Witnessing) is used in IVF laboratories around the world. Repromed meets the highest level of independent global and national quality standards.

What happens on the day of my egg retrieval and who will be involved?

On the day of your egg retrieval, we'll have a number of experienced staff on hand to help (including theatre nurses and Repromed doctors). They'll spend time with you, going over your health history and consent forms and ensuring you know exactly what to expect. This includes an embryologist from the Repromed laboratory who'll be taking care of your eggs and sperm for you.

The day before your egg collection your embryologist will go over the specific requirements for your cycle with you. This includes important questions such as how many eggs to inseminate with IVF or ICSI (or a combination of both), how many embryos to transfer to your uterus (usually one) and whether you have consented to freeze any remaining viable blastocyst stage embryos. They will also briefly recap on what to expect on each

of the six following days that your eggs, sperm and embryos are in the Repromed laboratory care.

Our embryologists are all registered medical laboratory scientists, highly qualified and experienced in this specialised field of medicine. They're also extremely passionate about their cause: helping you get pregnant, and are deeply dedicated to providing the very best possible care to your eggs/sperm and embryos. They strive to be empathetic to your needs, so we encourage you to ask questions or discuss any concerns you have during your time at Repromed by contacting us at any time.

Laboratory care

The six days following the egg collection can be a bit of an emotional rollercoaster, so we'll be in touch to update you each day the embryos are checked, usually between 9am and 10am.

After your embryologist has spoken with you, they will ask one of the Repromed nurses to check on your physical and emotional health. At this time the nurses will discuss starting your luteal support. Our experience is that while some clients wish to have extensive details of their embryo quality explained to them, others prefer to know only minimal details. For that reason, it's helpful to let the embryology staff know how you feel about the level of information you'll receive.

Part of being emotionally prepared for IVF is to understand the nature of the process: every day there are reduced numbers of embryos. That's because the process can be likened to 'survival of the fittest' where the most robust and healthiest embryo will be selected for transfer and freezing. To understand this better, please see our website, at **repromed.co.nz/possible-risks**

UNDERSTANDING THE PROCESS IN THE LAB: WHAT HAPPENS DAY BY DAY

Day of egg collection (Day 0)

There are three steps that happen on Day 0:

- Collecting and preparing your eggs for fertilisation
- Preparing sperm
- Insemination (adding sperm to the eggs)

Collecting and preparing your eggs for fertilisation

After your egg collection (also called OPU or egg pick up), your Repromed doctor drains the fluid from each follicle into a test-tube. It's then passed to the embryologist who pours the fluid into a dish under the microscope to search for each egg.

It's important to stress that it's often not possible to retrieve an egg from every follicle. So the number of mature follicles (greater than 15mm) seen in your last scan before treatment trigger only gives us a general idea of how many will be retrieved on the day of egg collection. Mature eggs usually release relatively easily, while immature ones stay stuck to the inside wall of the follicle.

The collected eggs are placed in a petri dish that has each well filled with a fluid designed to mimic the level of nutrients that are present in the fallopian tubes. All the surfaces that the culture dishes come into contact with are heated to body temperature (37°C). The egg is now ready to be inseminated. There are always risks associated with handling such small groups of cells under the microscope, learn more at **repromed.co.nz/possible-risks.**

GOOD TO KNOW

The number of follicles seen in the scan does not always equate to the number of mature eggs suitable for IVF. In NZ, the average resulting number of usable embryos for transfer and freezing is two.

Preparing the sperm

The majority of IVF cycles use fresh sperm provided on the day of the egg collection. However there are options available such as using backup frozen sperm or donor sperm or surgically retrieved sperm. It doesn't matter the origin of the sperm – fresh or frozen – the preparation is the same for all as described below. (For surgically retrieved sperm you will be given an info leaflet).

The same morning as the egg collection, the partner will be asked to produce a sperm sample. This can be produced at home and brought to the clinic within 40 minutes of production, the laboratory staff will give you an appointment time to drop it off. Alternatively the sample can be produced in the Repromed private room, the laboratory staff will need to book this room for you. It is recommended you abstain for two days (see previous All About Sperm section on preparing for treatment).

It takes about two hours to wash the sperm in a process where the sperm is separated out from the seminal fluid. The embryology staff analyse the sperm both before and after this washing process so that they can assess its quality. Throughout this process the strict electronic witness system described above will be utilised to track the sample and link it to your treatment cycle.

Insemination (adding sperm to eggs)

There are two options for insemination depending on the quality of the sperm. Standard IVF is used for sperm samples which fall within the normal numbers of motile sperm. Micro-injection technique (ICSI) is used when there is any concern or question about the sperm quality.

Standard IVF

For standard IVF, a drop of sperm is added to each egg in the petri dish approximately five hours after the egg collection. Approximately 50,000 motile sperm are added to each egg (usually two eggs per well in the culture dish). The eggs and sperm are then left for 18 hours in the incubator to let fertilisation occur naturally.

GOOD TO KNOW

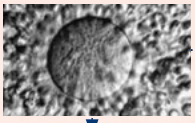
A Freeze-Only cycle may be recommended if you are at risk of OHSS or there is concern about your uterine receptiveness to embryo implantation that cycle. Approximately 30% of all IVF cycles are now Freeze-Only, where all suitable embryos are frozen on Day 5/6 and no fresh transfer takes place. You will be given a detailed Freeze Only ReproFact information sheet if your doctor recommends this.

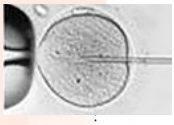
UNDERSTANDING THE PROCESS IN THE LAB:

Day by day - from Day 0 to your embyro transfer (ET)

DAY 0

Eggs collected from follicles





IVF
Sperm and eggs are placed together in a dish overnight. Cumulus cells removed the morning of Day 1.

ICSI/Cumulus Cell Removal
Cumulus cells are removed and stage of maturity is checked.

ICSI/ Microinjection
Eggs are injected with sperm (one per egg).

DAY 1

Fertilisaton check

Lab calls with update in the morning.

DAY 2

Expected cell number: 2–4 cells

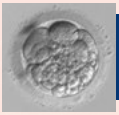
Day 2 No lab update.

Freeze only cycles No lab update.

DAY 3

Expected cell number: 6-8 cells

Lab calls if ET day has not yet been confirmed.



LESS THAN 2 GOOD QUALITY EMBRYOS

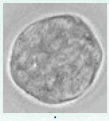
Day 3 ET Update given at time of ET. Remaining embryos cultured on to Day 6.

2 OR MORE GOOD QUALITY EMBRYOS

DAY 4

Embryos not checked

Day 4 No lab update.



DAY 5

Embryos checked for blastocyst formation

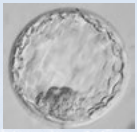
Lab calls with update in the afternoon if previous Day 3 ET.

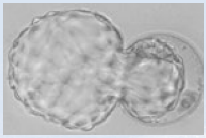
Day 5 ET Update given at time of ET. Remaining embryos frozen if suitable or cultured on to Day 6.

DAY 6

Embryos checked for blastocyst formation and frozen if suitable

Lab calls with update in the afternoon.





Hatching embryo

ICSI/micro-injection

For clients requiring ICSI (sperm micro-injection), the first step is to prepare the eggs by removing the cumulus cells so that the state of maturity can be determined. This is done using very fine glass pipettes with the help of the same enzyme that the sperm use to do this job (hyaluronidase), about two hours after the egg collection.

Usually around 85% of eggs collected are mature. Only mature eggs can be injected with sperm and unfortunately there is nothing that can be done for those that are immature or post mature (non-viable). For those with long term unexplained infertility, a split case of IVF and ICSI for a proportion of their eggs may be recommended by their Repromed doctor but a minimum of eight eggs needs to be retrieved in order for this to be worthwhile.

A delicate process

While the preparation by the embryologist takes a long while, the actual injection step only takes about one to two minutes per egg. Three to four eggs and sperm are loaded into separate tiny micro-drops in a single dish and placed under a high-powered microscope.

Next, a set of mechanical micromanipulators that move the needles around the dish and a set of hydraulic suction devices that operate the injection needles are attached to the microscope. The injection procedure firstly involves locating a normal shaped motile sperm, immobilising it by tapping it across the tail, then tail first aspirating (sucking) it up the injection needle.

Depending on the sperm's quality, the length of time it takes to perform this task can vary greatly. For surgically retrieved sperm, it could take several hours. Once the sperm has been stabilised, the injection needle is introduced into the centre of the egg and some suction is applied to break the membrane of the cell so that the sperm can be successfully positioned and the needle removed. The egg is then transferred back into the incubator.

FERTILISATION CHECK (DAY 1)

Early in the morning of Day 1, the embryologist views the fertilisation dish under the microscope. There are three things that could happen at this point:

- An average rate of fertilisation (around 70% of IVF treatments).
- Some eggs could be abnormally fertilised and are unlikely to develop.
- Sadly, some people will have no eggs fertilised due to either an egg issue, sperm issue or both.

Whether it's good or not so good news, the embryologist will call you as early as possible to let you know the results (usually between 9am and 10am). The embryologist will also give you an indication of what day to expect your embryo transfer (if you are having a fresh transfer). Sometimes you may be given a tentative Day 3 transfer day, as the embryologist may need to wait to assess the quality of the embryo before confirming a Day 3 or Day 5 transfer.

EMBRYO DEVELOPMENT CHECK (DAY 2)

By Day 2, most fertilised eggs will develop into an embryo – the single cell of the egg cleaves firstly into two cells and then again into four cells. This doubling of cell numbers continues as the embryo grows. The embryologist leaves your embryos in the incubator undisturbed on day two so there will be no call or update from the laboratory.

DEVELOPMENT CHECK (DAY 3)

By Day 3, embryos are expected to be at the 8-cell stage. This is the day when the Repromed staff review your embryo quality. At this stage, the embryologists are able to indicate the visual characteristics (morphology) of the embryo based on a grading system that ranges from Grade 1 being the best and Grade 4 being the worst. A Grade 1 embryo has equal sized cells, clear cell centres and membranes with no fragmentation. Some fragmentation can be normal and still result in the birth of a healthy baby.

The other thing to be aware of is that the grade of an embryo can alter over the six days. We've frequently seen embryos that had significant fragmentation on Day 3 turn into high quality embryos on Day 5 and vice versa.

DEVELOPMENTAL STAGE (DAY 4)

By Day 4, the embryo has approximately 16 cells that have compacted together to show a tight bundle that can't usually be graded.

BLASTOCYST DEVELOPMENT (DAY 5–6)

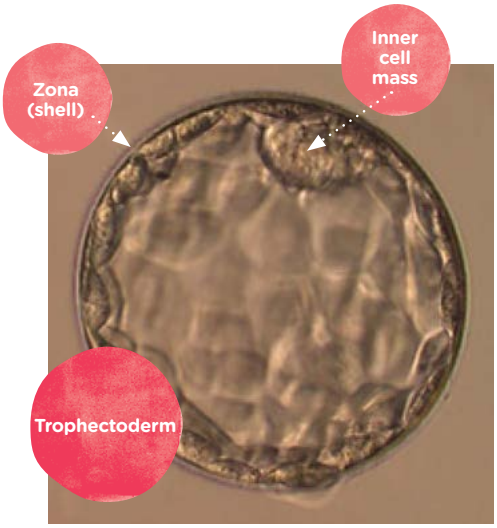
By Day 5, a viable and healthy embryo should have 60–100 cells that have separated into specialised cell types; the trophectoderm and inner cell mass cells. The embryo has a fluid-filled cavity at this stage that looks a bit like a balloon-like structure and is termed a 'blastocyst'. As the fluid cavity and the cell numbers increase, the embryo shell begins to thin out until it cracks open and releases the embryo, allowing it to begin the implantation process.

Over the page is what a top-quality Day 5 blastocyst embryo looks like. It is graded as a 4Aa using an internationally accepted scoring system, where the number (1–6) refers to the size of the cavity and the first letter (A to D) refers to the size and condition of the inner cell mass, while the second letter (a to d) refers to the number and condition of the outer trophectoderm cells. It's important to understand that this grading system only provides an indication of the embryo's appearance and growth rate compared to that found in nature: however, it doesn't strongly predict the genetic normality of the embryo. Research has shown that even 40–60% of top-grade embryos transferred have chromosome abnormalities and result in either failed implantation or an early miscarriage.

PREIMPLANTATION GENETIC TESTING

The only way of knowing if an embryo is genetically normal is to perform an embryo biopsy on Day 5 or Day 6 and have the biopsied cells tested using Preimplantation Genetic Testing (PGT-A). Please refer to our PGT brochure for more information regarding genetic testing.

As you're probably aware, the rate of chromosomally abnormal embryos increases as women age. Women in their 30s have approximately 30% chromosomal abnormalities, but by the age of 38 years, this has increased to 50%.



Above is an example of a high quality 4Aa Day 5 blastocyst stage embryo

WHEN IS THE BEST TIME TO TRANSFER TO THE UTERUS?

At Repromed, our policy is to culture embryos through to the blastocyst stage wherever possible. This is because there is evidence that an embryo that has survived five days in culture and is of a high grade has a slightly higher chance of pregnancy than earlier embryo stages.

There are two primary reasons for this: firstly the embryo has proven itself to be highly viable (strong) and secondly it is more natural for this stage to be transferred into the uterus (earlier stages normally remain in the fallopian tube).

We never expect all of the embryos that have shown normal fertilisation to be viable by the blastocyst stage. We normally see around 40% of normally fertilised embryos make it to the blastocyst stage. On Day 3 however all of the embryos can look very similar, for this reason the embryologists will recommend a Day 3 transfer if there are two or less Grade 1 embryos on Day 3. Often the embryologist will book you for a tentative Day 3 transfer if there are three or less embryos that have shown normal fertilisation.

When a Day 3 embryo transfer is recommended, the embryology staff will ring you early on this day to update you on how the embryos have developed to confirm if the transfer is going ahead. All remaining embryos after a Day 3 transfer are cultured on until Days 5 and 6 when we can freeze any high quality embryos.

GOOD TO KNOW

Do all fertilised embryos reach the blastocyst stage?

We expect approximately 40% of embryos to reach the blastocyst stage and half of those may be suitable for freezing.

TRANSFERRING THE EMBRYO

If everything has gone to plan up until now, the highest-grade embryo will be transferred into your uterus. Prior to the transfer, the embryologist will call you to talk about the quality of your embryos overall and particularly, the embryo being transferred.

A cross-witness check is performed at this stage of the transfer process with a Repromed health care assistant or nurse, doctor and embryologist. The process is a bit like having a 'smear test' in that a speculum is introduced into the vagina and a small catheter (tube) is inserted into your uterus by the doctor. Once your doctor is satisfied with the positioning by using an abdominal ultrasound probe, the embryologist will remove the embryo dish from the incubator and load (aspirate up) the embryo into another even smaller inner catheter.

Next, the embryologist will gently introduce the inner catheter into the outer catheter that the doctor has positioned, and then the doctor will carefully inject the embryo into your uterus. The catheters are then checked under the microscope to ensure that the embryo has been successfully inserted. If so, the embryologist will give the doctor the 'all clear' to remove the speculum and finish the procedure.

Occasionally difficulties may arise, including:

- Difficulty in passing the fine catheter easily through the cervix.
- On checking the catheter after the procedure, the embryo may remain in the catheter and a further attempt at transferring the embryo into the uterus is needed.
- Mild abdominal cramping may occur after the transfer. This is normal and may continue up until 24 hours after the transfer.

How to prepare for your embryo transfer

Embryo transfers are mostly carried out in the middle of the day. You'll need to arrive at the clinic with a full bladder which is best achieved by firstly emptying your bladder 1-2 hours before the procedure then drinking 500mls - 1L of water. The procedure only takes 10 to 15 minutes to complete.

Your partner, or support person, is welcome to attend the embryo transfer. Please note that children are only permitted in the waiting room (with supervision) and not in the treatment room, so you may, if applicable, wish to arrange for childcare on this day.

After this transfer you shouldn't feel any discomfort and you can continue with your day as you usually would. The embryo is snug inside your uterus (we promise it won't fall out!). Our key advice for recovery is to just avoid anything you find personally stressful and be kind to yourself during this emotional time.

Embryo freezing process

Once the highest-grade embryo has been transferred into your uterus, any excess high quality embryos can be frozen for potential transfer at a later date. Or your doctor may advise a 'Freeze Only' approach where all suitable high quality embryos are frozen to maximise the chance of success. In this scenario, you will be given a ReproFact information leaflet with full details.

Embryo freezing at Repromed is performed on Day 5 and Day 6 (blastocyst stage embryos) using an advanced cryo-preservation (freezing) technique called Vitrification. Because only high graded embryos tend to survive the thaw, we have strict criteria for freezing embryos. More than 95% of embryos survive the freezing and thawing process.

Like most things with IVF/ICSI, the chance of having embryos frozen is very much dependent on your age. It is important to be aware of the possibility that you may have no excess embryos that develop to a stage and grade that can be frozen. In New Zealand, the average number of usable embryos per treatment cycle, which includes those that are transferred fresh, plus frozen, is two.

After Day 6, all non-viable embryos will be disposed of following the specific instructions stated in your IVF/ICSI consent form.

Embryo storage

For any embryos frozen during a cycle, storage fees will apply. The costs are different for whether your treatment was privately or publicly funded.

For privately funded cycles, the first year of embryo storage is covered under your initial cycle costs. After this time, an annual storage fee invoice will be sent to you, usually by email, on the anniversary of the embryo freezing date and is to cover the upcoming 12 months of storage.

For publicly funded cycles, the storage of your embryos is covered by public funding for 18 months after the freezing date. Once this time frame is up, a storage fee invoice will be sent to you every 6 months to cover the upcoming 6 months of storage.

If there is a death of either partner, or one of you becomes incapable of reviewing your consent, Repromed is required to dispose of the embryos or manage them in accordance with the conditions on your consent forms. An embryo transfer cannot proceed without consent from your partner.

New Zealand legislation allows embryos to be frozen for up to 10 years, in some circumstances this period may be able to be extended. Embryos must be used, discarded, or donated within that time limit. Please inform Repromed staff if you have any cultural or spiritual requirements relating to the disposal of embryos. If at any time you wish to discontinue storage or donate your embryos to another client, please contact the lab at **labs@repromed.co.nz** or 09 524 1231 to request an Embryo Disposal form.

PREPARING FOR THE PREGNANCY TEST

Positive pregnancy test

At the time of your first pregnancy test, you will be just four weeks pregnant as pregnancy dates are calculated from the first day of your last period or 14 days post ovulation.

A pregnancy scan is done at 7 to 8 weeks gestation (although anyone at higher risk of ectopic pregnancy should be scanned around 6 weeks). The scan will show if the pregnancy is viable (a heartbeat can be seen), how many fetuses are present and whether the fetus is within the uterus.

Once a viable, ongoing pregnancy has been seen you will be referred to your Lead Maternity Carer (LMC) of choice for all future management. This is usually around seven weeks so please ensure you know who you will be seeing at the scan so we can discharge you on to them.

Negative result

If the pregnancy test is negative a nurse will ring and advise you of the appropriate course of action. Negative results and pregnancy loss is a time of great distress and is heartbreaking for us all. The team is here to support you through this. You can contact us at any time for counselling support or information.

CYCLE REVIEW

Our embryologists use data recorded throughout this treatment cycle to produce a laboratory summary, which will be sent to you 5-10 business days following Day 6 of embryo culture. The doctors will then review your entire cycle after the outcome of your cycle is known and send you a letter outlining any recommendations for any future treatment with the offer to have a cycle review appointment.

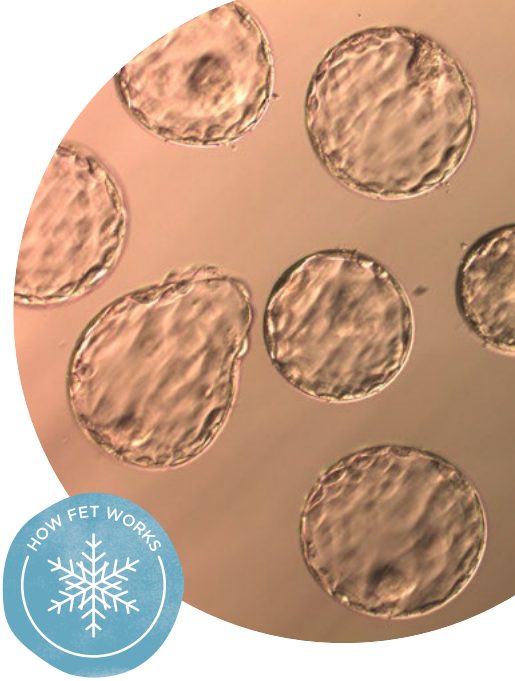
GOOD TO KNOW

If your IVF/ICSI cycle hasn't been successful, the next step is usually to thaw one of your frozen embryos for transfer into your uterus. If you do not have embryos frozen in storage, then you may wish to consider having another IVF cycle and you would need to discuss with your Repromed doctor about your next steps.

ADD-ONS

We offer a range of additional techniques that are optional extras (Add-ons) to the core treatment cycle. Our team continuously assesses the scientific merits, safety, value and clinical evidence of the latest medical advances, to ensure clients have access to a comprehensive range of options. It is our policy to recommend Add-ons only where a considered benefit to improved chances of pregnancy exist, based on each client's reproductive history and diagnosis. Add-ons have extra costs associated with them, learn more about Add-ons at **repromed.co.nz /fertility-treatments/add-ons.**

Frozen embryo transfer (FET) treatment and process



FROZEN EMBRYO TRANSFER (FET) TREATMENT AND PROCESS

IVF cycles often result in embryos being frozen, thus providing you with additional opportunities to get pregnant by having them thawed and transferred one at a time during a single Frozen Embryo Transfer Cycle. Legislation in New Zealand allows for embryos to be kept in storage for up to 10 years after which time it is necessary to apply for an extension to an ethics committee (ECART) if further storage is required. You will be contacted every year by our clinic to ask if you wish to continuing paying for the storage of your embryos or if you wish to dispose or donate them.

Prior to your first FET cycle, a review appointment with your doctor is required. Your doctor will have reviewed your menstrual history and consulted with you about the best management of your FET cycle, as per the following three cycles listed. Once the type of cycle you will have has been confirmed, your nurse will provide you with detailed instructions of how to proceed with a Nurse Orientation appointment or email. You will be given your cycle plan and all your consents. The consents need to be returned before, or at the latest, at your book on.

To arrange an FET cycle, you will need to email the nurses on your Day 1. Return your consents if you haven't already. Then you will be sent for Day 2 blood tests with all cycles.

a. **A natural FET cycle** - there are no medications as long as you have regular cycles. We can then monitor your cycle with daily blood tests and a scan from approximately Day 10. Once ovulation has been detected and confirmed, the embryo transfer will be timed by our staff five days later. Occasionally some luteal support is also required in the form of daily vaginal tablets of Progesterone. See page 44 for an overview including when blood tests and scans are anticipated.

b. A manufactured FET cycle - your cycle is artificially created by administering daily hormones tablets of Estrogen in the follicular phase until a scan confirms that the lining of your uterus has developed to a certain thickness. Once this has been achieved, the next luteal phase of your cycle is induced by administering daily Progesterone vaginal tablets. The staff will let you know when the embryo transfer will be planned for 6 days after the start of the Progesterone. See page 45 for an overview including when blood tests and scans are anticipated.

c. A stimulated FET cycle - an ovarian stimulation tablet (e.g. Letrozole) is taken from Day 2 to 6 of your cycle. Usually only 1-2 follicles grow which are monitored from Day 10 with blood tests and a scan. You will continue to have daily blood tests to check for natural ovulation. Our staff will inform you five days after ovulation. Luteal phase support consisting of vaginal Progesterone may be used throughout the luteal phase to support embryo implantation.

We instruct all couples (where relevant) to use protection during intercourse during all cycle types including manufactured cycles to minimise the chance of multiple pregnancies.

GOOD TO KNOW

A small percentage of frozen embryos don't survive the thaw process. You may get a phone call on the scheduled day of transfer that the embryo transfer will not be going ahead, or another frozen embryo needs to be thawed.

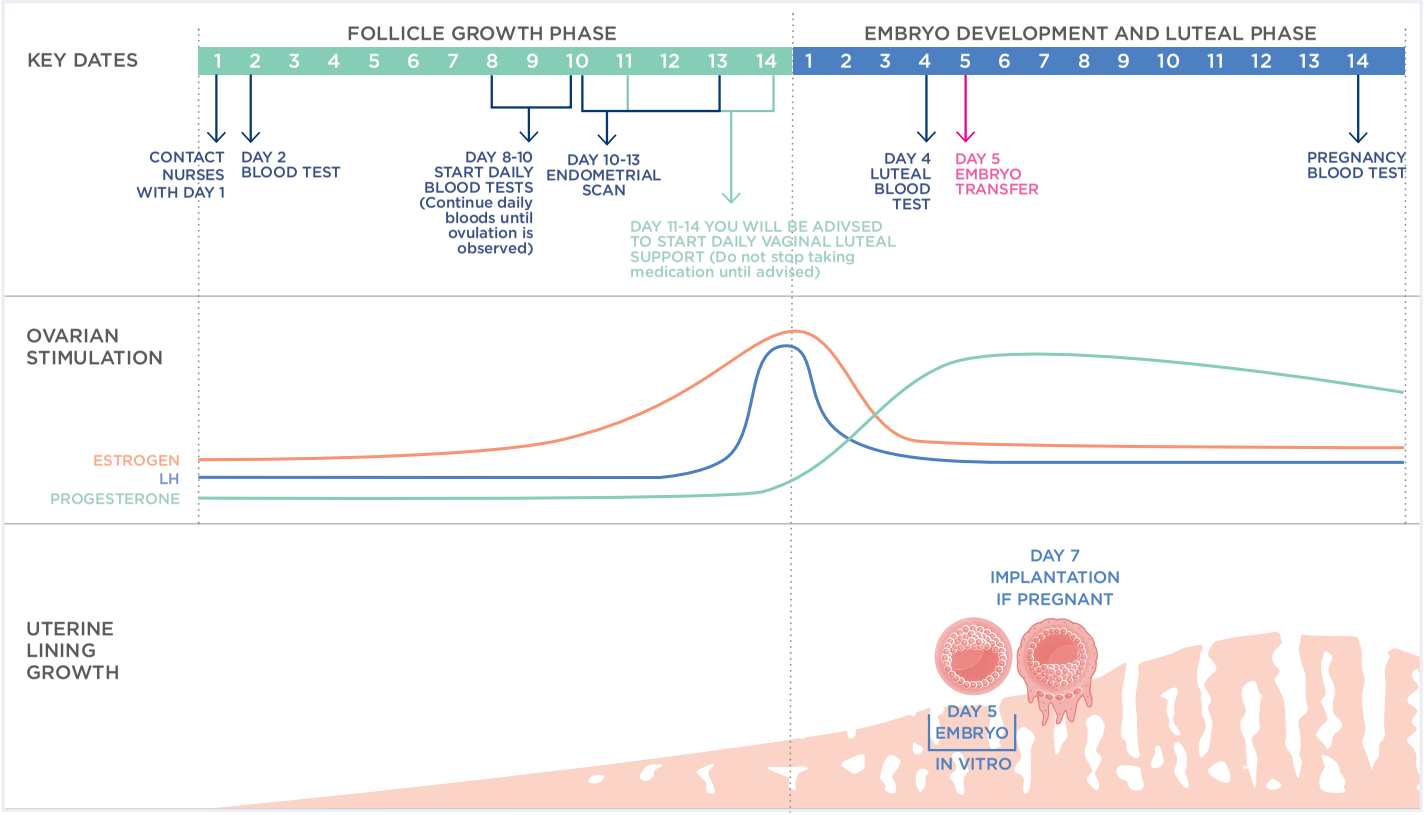
The day prior to your embryo transfer, all cycle types outlined above will require a blood test for Progesterone to ensure that it is high enough to support a pregnancy. In the instance where the Progesterone is not high enough, your doctor will advise if you either require an increased dose of Progesterone or occasionally will recommend that the embryo transfer be cancelled, and the FET cycle be repeated with modifications after speaking with your doctor.

On the morning of your embryo transfer, our lab staff will thaw your embryo and observe it after at least one hour to ensure that it shows clear signs of survival. Normally we expect around 98% of frozen embryos to survive the thawing process. If, however it has not survived our staff will contact you to let you know and discuss options such as thawing another embryo, if available.

The transfer is usually planned for the middle part of the day and carried out in the same way as described in the previous section on embryo transfer (including the full bladder).

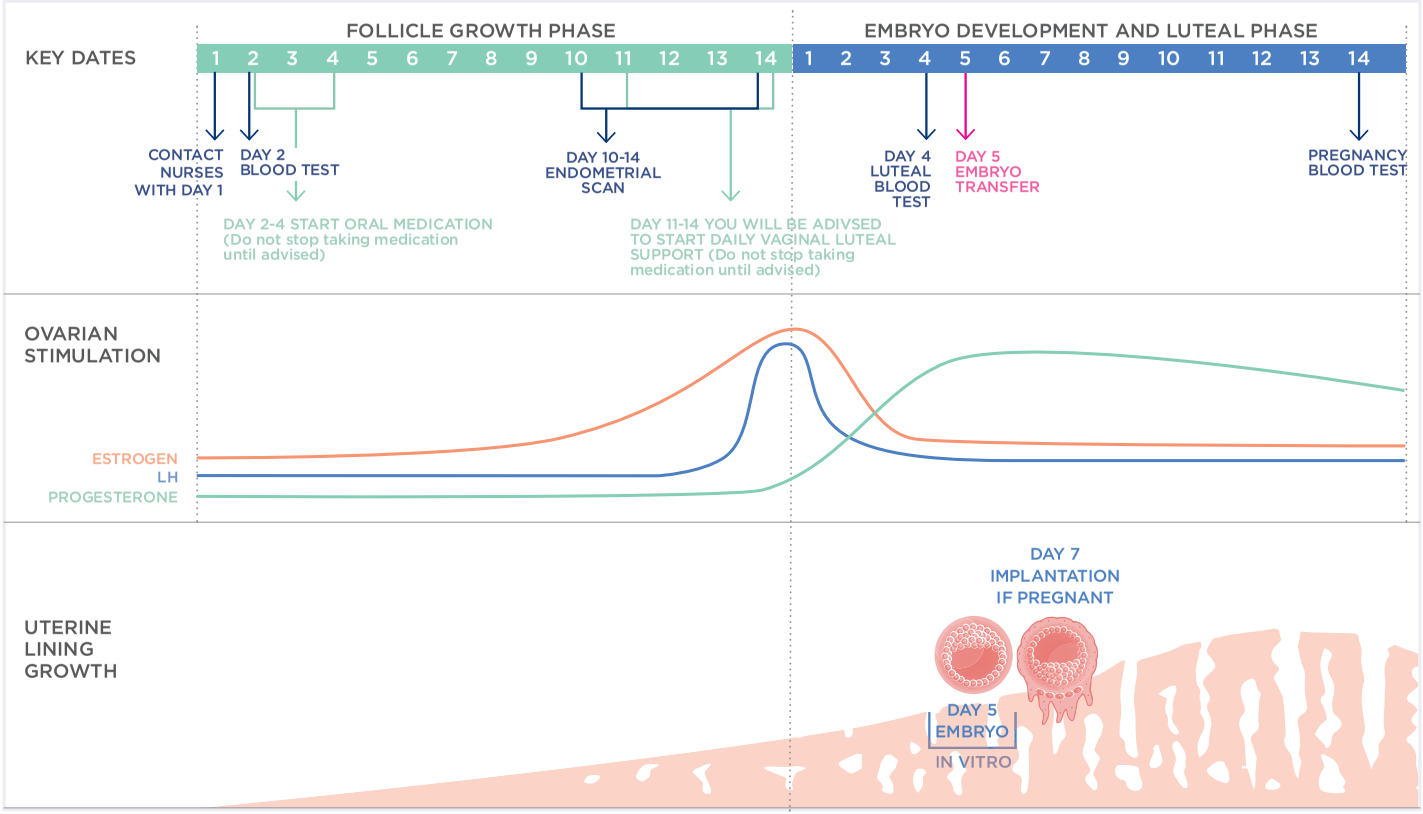
If you become pregnant from this cycle, we will monitor you with weekly blood tests and an ultrasound scan at seven weeks before discharging you to your Lead Maternity Carer (LMC). If this cycle unfortunately does not result in a pregnancy, we will inform you when to stop taking your medications. If you have remaining frozen embryos, you may book on for a repeat cycle with your next period, or you may wish to book a review appointment with your doctor.

FET NATURAL CYCLE OVERVIEW



Please note this is a simplified FET natural cycle overview. You will receive a personalised cycle plan tailored to your specific needs.

FET MANUFACTURED CYCLE OVERVIEW



Please note this is a simplified FET manufactured cycle overview. You will receive a personalised cycle plan tailored to your specific needs.

Possible risks and side effects of treatment

It's very important that you are aware and fully informed of any potential risks and side effects before signing a consent form to undergo treatment. Below we provide information on one of the most common risks, OHSS, which can sometimes complicate an otherwise straightforward IVF cycle.

Further information about the possible risks and side effects associated with fertility treatment can be found on our website, at: **repromed.co.nz/possible-risks.**

OVARIAN HYPERSTIMULATION SYNDROME (OHSS)

What is it?

OHSS describes a situation where the ovaries over-respond and have an excessive number of follicles in response to the stimulation medication that are taken for IVF/ICSI. In severe cases, the body can respond to this over-activity by releasing chemical substances into the bloodstream that cause fluid to move out of the blood and into the spaces around the vessels such as the abdomen and lungs. This makes the blood more concentrated, which puts pressure on the kidneys function, resulting in a dark appearance of the urine.

How often does it happen?

About one in 20 people undergoing IVF/ICSI will develop some degree of hyperstimulation.

Is it serious?

There are three levels of OHSS:

- Mild: The majority of OHSS cases are in this category which involves some abdominal discomfort. This can be safely monitored and treated at home with supervision from Repromed.
- Moderate: These cases may require hospitalisation for close monitoring and an intravenous drip to treat the dehydration symptoms.
- Severe: These cases require hospitalisation and careful monitoring. Drainage of excess fluid from the abdominal cavity or pleural cavity (surrounding the lungs) may be required in rare circumstances. Medications to thin the blood and reduce the risk of blood clots are also usually administered.

NOTE **It is important to advise your doctor of a family history of stroke or blood clots.**

How can I tell that I may be developing OHSS?

These are the symptoms to look out for:

- Abdominal pain and discomfort.
- Swelling of the abdomen.
- Shortness of breath, vomiting and nausea.
- Reduction in urine output, dark urine, passing less urine than normal or urine retention.
- Dehydration (feeling dry and thirsty like during a hot day).
- Diarrhoea (loose bowel motions) or constipation.
- Rapid weight gain (clothes don't fit anymore).
- Swelling of the legs and genital area.

How does pregnancy affect OHSS?

Most moderate to severe cases of OHSS occur when the pregnancy is from a fresh transfer in an IVF/ICSI cycle. The pregnancy hormone hCG plays a role in the cascade of events that cause OHSS. This is why trigger injections that contain this hormone are avoided in treatment cycles that are identified as high risk cases where excessive numbers of follicles have developed. Most pregnancies are unaffected by this condition.

What happens if I get OHSS symptoms?

For mild symptoms, contact us at Repromed:

- During work hours, contact the nurses and they will arrange for you to have blood tests that will help in the diagnosis of the condition. Rest and taking time off work can help you avoid hospitalisation.
- After hours, ring the main number 09 524 1232 and you will be informed of the on-call Repromed doctor to contact.

For moderate to severe symptoms where you develop chest or calf pain you should immediately contact us or go to a hospital Accident and Emergency department, then contact the Repromed nurses or leave a message to let us know.

The hospital team will look after you in close liaison with Repromed clinicians. If necessary, we will consult with other clinicians.

Intravenous fluids, pain relief and other medication including blood thinning agents and stockings may be needed. Occasionally the excess fluid may need to be drained.

NOTE **It is important to drink adequate fluids during your IVF/ICSI cycle: two to three litres of water per day.**

Are some people more at risk than others?

Yes, some people who are more at risk have:

- Polycystic ovaries.
- AMH levels higher than 35 pmol/l.
- A BMI less than 20 (are thin).
- Previously had a high response treatment cycle in the past.

Can OHSS be minimised or prevented?

Prevention is the best form of treatment. If an unexpectedly high ovarian response to the stimulation medication is encountered early in your cycle, and the chance of OHSS is very high, we may:

- Change the trigger injection from an hCG containing compound to a safer agonist (Buserelin) formulation that is not involved in the OHSS cascade of events.
- Proceed to a Freeze Only cycle to prevent a pregnancy from occurring, leading to an increased chance of OHSS due to the pregnancy hormone.
- Recommend discontinuing the cycle before the trigger injection and egg recovery, then begin another cycle with a lower dose.

Glossary

ACART	Advisory Committee on Assisted Reproductive Technology.
AGONIST	A synthetic hormone used in an IVF cycle to control the growth of follicles and sometimes used to trigger ovulation (especially when OHSS is of concern and no fresh embryo transfer is planned). Example: Buserelin
AMH (Anti Mullerian Hormone)	Indicator of ovarian reserve. Level used to plan for the dose of stimulation medication (FSH) in a treatment cycle.
ANEMBRYONIC PREGNANCY	No fetal heartbeat is visible at the 6 to 8 week scan.
ANEUPLOIDY	Abnormal number of chromosomes.
ANTAGONIST	A synthetic hormone used to help prevent spontaneous ovulation in a treatment cycle. See the section on IVF Process for a complete explanation. Example: Antagnostic cycle (Orgalutran)
ART (Assisted Reproductive Technology)	Includes all IVF/ICSI, IUI, Ovulation Induction, Donor cycles, etc.
BLASTOCYST	Day 5 to 6 stage embryo consisting of 60 to 100 cells. Stage that Repromed freezes high quality embryos.
BIOCHEMICAL PREGNANCY	A pregnancy that ends at a very early pregnancy stage prior to ultrasound confirmation. The pregnancy hormone bHCG indicates a pregnancy but the levels may be low.
CERVIX	Located between the uterus and the top of the vagina. A catheter is passed through this to transfer embryos and semen for IUIs.
CLEAVAGE STAGE	Day 2/3 stage embryo with 2–12 cells.
CONGENITAL	A defect in the fetus or baby that might be hereditary and present at birth.
CRYOPRESERVATION	Freezing of embryos, eggs, or sperm for future use. Cells remain dormant and stored at minus 196 degrees Celsius until they are thawed for use.
CUMULUS CELLS	The cloud of cells surrounding the egg that the sperm penetrate through to fertilise. These are removed by the embryologist before ICSI to assess if the egg is mature and ready for injection.
DOWN REGULATION	Short for Long Down Regulation which is an IVF/ICSI treatment type where an agonist medication is used to control the growth of the follicles and stimulate ovulation (trigger).
ECART	Ethics Committee on Assisted Reproductive Technology. Submissions are made to this body prior to use of some sperm /egg/embryo donor and surrogacy arrangements.
ECTOPIC PREGNANCY	Embryo implantation outside the uterus (usually in the fallopian tubes). Surgical removal of the pregnancy is usually required.
EGG COLLECTION	Also known as the OPU (Oocyte Pick-Up). Procedure required to retrieve the mature eggs for fertilisation in the laboratory or freezing.
EMBRYO	After fertilisation the egg is then referred to as an embryo. It is the stage of development that lasts up until the 8th week of pregnancy.
EMBRYO BIOPSY	The removal of one or two cells from an early IVF embryo for preimplantation genetic diagnosis. Repromed do this on Day 5 and 6 of development when the embryo is a blastocyst.
EMBRYO TRANSFER	Procedure for transferring a fresh or FET (thawed) embryo by placing a fine catheter through the cervix and up into the uterus. Similar to a cervical smear procedure.
EMPTY SAC	No foetal heartbeat is seen at the six-to-eight-week scan.
ENDOMETRIOSIS	A condition where cells from the lining of the uterus migrate abnormally into the pelvic cavity and cause complications, discomfort, and fertility challenges.

ENDOMETRIUM	The mucus membrane that lines the inner surface of the uterus. The embryo needs to attach and embed into this for implantation and pregnancy to occur.
ESTRADIOL VALERATE	A synthetic estrogen hormone administered in some treatment cycles to stimulate the lining of the uterus to grow in preparation for embryo implantation.
ESTROGEN	A hormone release in increasing levels as the follicle grows on the ovary. Blood tests for this hormone during a treatment cycle indicate the number and size of the follicles, helping to predict when to trigger the egg collection or insemination.
FALLOPIAN TUBES	Tubes that extend from the uterus to the ovary and serve as a passageway for the egg and sperm to connect and fertilise.
FERTILISATION	When the sperm successfully enters the egg to begin embryo development. The embryologists check for this on Day 1 (the day after egg collection).
FET (Frozen Embryo Transfer)	A procedure in which a frozen embryo in storage is thawed and transferred to the uterus. This usually occurs during an unstimulated natural cycle.
FETUS	The unborn child from the eighth week of pregnancy until birth.
FOLLICLE	Where the egg is located in the ovary. The follicle grows in size as it responds to the stimulation medication and is measured by ultrasound scan. The hormones that the follicle secretes are also measured through blood tests and indicates when to trigger for the egg collection.
FOLLICULAR PHASE	First half of the menstrual and treatment cycle when the follicles are growing in response to the fertility stimulation medication. From Day 1 to approximately Day 14.
FREEZE ONLY CYCLE	When no fresh transfer is planned. This occurs when there are clinical concerns about a) development of OHSS, b) when the Progesterone levels get too high, or c) when health issues arise that might prevent embryo implantation. Note that only high-grade Day 5/6 embryos may be frozen.
FSH (Follicle Stimulating Hormone)	This is produced by a control gland in the brain. It stimulates the growth of follicles on the ovary during the menstrual cycle. The administration of this medication in an IVF/ICSI cycle, causes more follicles to grow than in a natural cycle, allowing more than one egg to be collected. FSH also induces spermatogenesis in the testicle.
GAMETE	Technical name for a sperm or egg cell.
GESTATION	The period of foetal development inside the uterus measured by weeks.
GnRH (Gonadotrophin)	Releasing hormone which is the 'master' hormone produced by the brain to control the release of LH and FSH. In an IVF/ICSI cycle it is used in a variety of formulations to control the growth of follicles and release of eggs.
HART (Human Assisted Reproductive Technology) Act	The New Zealand legislation that all fertility clinics in New Zealand are required to work within.
HCG (Human Chorionic Gonadotrophin)	This is the pregnancy hormone released by the placenta and detected in pregnancy tests. The levels are monitored during the first seven weeks to indicate the health of the pregnancy. In IVF/ICSI cycles it may also be administered as a trigger injection to start the ovulation process.
HORMONE	A chemical substance, secreted by the glands, which is carried by the bloodstream to the target organ influencing its activity, growth, and nutrition. The level of hormones are measured in blood tests during the tracking stage of an IVF/ICSI /IUI cycle. Manufactured hormones are administered during an IVF/ICSI cycle to stimulate multiple egg growth.
HSG (Hysterosalpingogram)	Is a procedure where a dye is injected through the cervix and into the uterus to inflate the fallopian tubes. An X-ray is performed to assess if the fallopian tubes are open or blocked.
HYSTEROSCOPY	A diagnostic procedure whereby an instrument (hysteroscope) is inserted through the cervix into the uterus for assessment. This is carried out to investigate if there are any abnormalities in the uterus.

ICSI (Intracytoplasmic Sperm Injection) also referred to as MICROINJECTION	This procedure involves the selection and injection of a sperm into an egg. It is used when the sperm count, motility or shape of the sperm is below the level acceptable for standard IVF.
IN VITRO	Technical term for procedures that are performed outside the body (i.e., fertilisation).
IN VIVO	Processes that occur naturally inside the body.
IUI (Intrauterine Insemination)	A procedure whereby sperm prepared by the embryologists is placed directly into the uterus by a nurse or doctor.
IVF (In Vitro Fertilisation)	A procedure in which an egg is removed from a mature follicle and fertilised by a sperm outside the human body (i.e. in a dish). The resulting embryo is then either transferred fresh into the uterus or frozen for future use.
KARYOTYPE	The genetic makeup of an individual – usually determined by a photograph of the cell's chromosomes.
LAPAROSCOPY	Diagnostic procedure where an instrument (laparoscope) is inserted through a small incision at the naval, to enable visualisation of the pelvic cavity and its organs to assess for any abnormalities that might be preventing natural pregnancy.
LH (Luteinising Hormone)	This is produced by a gland in the brain and responsible for stimulating ovulation. In IUI and FET cycles the level of LH is assessed in blood test results to help predict the best day for insemination or embryo transfer. It is sometimes added into the ovarian stimulation of IVF/ICSI cycles to balance out the hormone profile.
LUTEAL PHASE	The second half of the menstrual cycle after ovulation until the menstrual period starts. This is the phase of embryo implantation, so it is important that the correct hormone levels are present for this to occur. A blood test for Progesterone helps determine if the optimal environment for implantation is present. Sometimes extra hormones are required to maintain this – called Luteal Phase Support.
MENOPAUSE	The end of menstrual cycles and loss of ovarian function. It commonly occurs in people around 53 years of age. Artificial stimulation of the uterus is however possible past menopause to allow pregnancy to occur from ARTs.
MENOPAUSE (Early)	Menopause in anyone less than 46 years.
MENOPAUSE (Premature)	Menopause in anyone less than or equal to 35 years of age and is known as premature ovarian insufficiency. This can be induced by medical conditions, treatment or hereditary. The AMH level can be used as an assessment tool for ovarian reserve and a predictor of early loss of fertility.
MISCARRIAGE	Loss of pregnancy after evidence of a pregnancy observed on ultrasound scan.
MOTILE	Ability to move. This is an important aspect that is measured in a semen sample.
OHSS (Ovarian Hyperstimulation Syndrome)	A group of symptoms which is associated with ovarian enlargement after stimulation of the ovaries with fertility medication. In severe cases it can develop into a life-threatening condition.
OOCYTE/OVUM	The egg cell – also referred to as a gamete or ovum. Usually, one mature egg is produced in the ovary each month, but IVF/ICSI and some IUI treatments aim to produce multiple eggs under the administration of fertility medication.
OVULATION	The normal process of release of a mature egg from an ovary approximately 14 days prior to the onset of the menstrual period. In IVF/ICSI cycles ovulation is actively avoided by the timing of the control medication and trigger injection, to minimise the loss of eggs. In IUI and FET cycles natural ovulation is monitored to the timing of the insemination or embryo transfer. The main hormones that indicate ovulation are a rise in LH and Progesterone.
PATENT TUBES	Open fallopian tubes allowing free passage for the union and transport of the egg, sperm, and embryo.
PERINATAL	The time before, during or after the time of birth.

PITUITARY GLAND	A small 'pea' sized gland at the base of the brain which secretes a number of hormones responsible for normal growth, development and fertility such as LH and FSH.
PGT-M/SR/HLA – previously known as PGD (Preimplantation Genetic Testing)	The process of taking cells from an embryo to check for a specific genetic abnormality. At Repromed we perform the biopsy of four to 10 cells at the Day 5/6 blastocyst stage to send to a specialised genetic lab for testing. All biopsied embryos are frozen, and the unaffected normal embryos are selected for an FET cycle at a later date. This technique is used for clients who are known to have or carry a genetic defect that has a high chance of affecting their children.
PGT-A – previously known as PGS (Preimplantation Genetic Testing)	The process of taking cells from an embryo to check for the normal number of chromosomes present. At Repromed we perform the biopsy of four to 10 cells at the Day 5/6 blastocyst stage to send to a specialised genetic lab for testing. All biopsied embryos are frozen, and the unaffected normal embryos are selected for an FET cycle at a later date. This is for any client who wants to be confident that they are only transferring embryos that have the correct number of chromosomes but is recommended mostly for clients over the age of 37 when the rate of abnormal chromosomes in the eggs is known to significantly impact on the pregnancy rate.
POLYCYSTIC OVARIAN SYNDROME (PCOS)	Polycystic ovarian syndrome (PCOS) is a hormonal condition that affects about one in 10. This condition is associated with increased levels of insulin and androgens that cause symptoms such as irregular periods, excessive facial and body hair, pimples and weight gain.
PROGESTERONE	A hormone produced by the ovary in the Luteal phase. Its main function is to change the growth of the endometrium and facilitate the implantation of the embryo. It is measured routinely in all treatment cycles through a blood test. If the Progesterone levels are not optimal in an IVF/ICSI cycle, a Freeze Only cycle may be advised.
RECOMBINANT HORMONE	A synthetically created hormone that is a copy of a naturally occurring hormone.
SEMEN	The fluid containing sperm. This fluid must be separated from the sperm prior to any IVF/ICSI or IUI procedure, in a process called sperm washing. This technique takes approximately two hours to perform.
SPERMATOGENESIS	Production and development of the sperm cell, which takes 90 days.
SPERM AND SPERMATOZOON	Mature sperm cell (gamete) produced by the testicle and located in the seminal fluid.
SPERM STIMULANT	A chemical added to sperm prior to ICSI that stimulates motility/movement in samples that have very low motility.
TESE (Testicular Sperm Extraction)	Where there is no sperm in the ejaculate so a small cut is made in the testicle to remove tissue that may contain sperm. The isolated sperm is used to inject sperm using the ICSI procedure.
UTERUS	The reproductive organ where a pregnancy develops.
VAGINAL ULTRASOUND	Passageway before the cervix and uterus where the semen is deposited during natural intercourse. Ultrasound scans are often performed by the doctor using a vaginal probe that helps to visualise the ovaries clearly. During the egg collection procedure, the vaginal probe is inserted to allow the needle to be safely guided into the ovary.
VITRIFICATION	The method of freezing embryos. This is a very fast process that takes around three minutes and helps to protect the embryo at low temperatures by reducing the chance of ice crystals forming.
ZONA PELLUCIDA	The gel-like coat that naturally surrounds the egg and stays attached for six days of development. The sperm binds to this coating during natural fertilisation and IVF and acts as a barrier for other sperm to penetrate. It protects the embryo as it naturally travels down the fallopian tube. As the embryo grows, the zona thins and expands, until the embryo hatches out, allowing it to implant into the lining of the uterus. In some cases, the embryologist may recommend that this hatching process is assisted by performing some laser thinning on the zona, especially where the zona is considered to be exceptionally hardened or thick.

HIRANGA HUA I TE MANAWANUI

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