your guide
Fertility Treatment with Reproductive Medicine
ZERO TOLERANCE POLICY
Respect our staff and ensure your family and visitors act accordingly.
Monash IVF has a zero tolerance policy in relation to harassment, verbal abuse or aggression and non-compliance with this policy will result in intervention by Monash IVF Management and/or hospital security.
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We would like to help you build your family

Having a baby should never become a process. We recognise that even if you are unable to conceive naturally the creation of a new life is a moment to treasure.

At Reproductive Medicine we believe in people over process. We offer our best in personal care, compassionate support and professional treatment to guide you through one of life’s biggest journeys.

We have been offering fertility services since 1988. During that time Reproductive Medicine have aided thousands of couples and individuals in achieving full term pregnancies. We have been instrumental in making assisted reproductive technology accessible to people living in rural and regional Australia.
Here with you every step of the way

For many couples and individuals your arrival at this point has already been a long path filled with emotional highs and lows. During your time with us we aim to provide a secure, supportive and stable environment to work with you towards achieving your family goals.

Most importantly of all, you are not alone.

Fertility treatment is an intensive experience that requires a large emotional investment. We encourage you to visit us and to meet our fertility specialists. Sit and discuss your family aspirations and talk over your chances of achieving a pregnancy with Reproductive Medicine.

We take great pride in offering one-on-one support and highly attentive care. Our staff to patient ratio is higher than those of larger centres which means we can devote more attention to each patient. Enjoy the individual attention of your fertility specialist, nurses and laboratory technicians through every step of your treatment.

Your fertility questions answered

This information guide will answer many of the questions that you and your partner will have.

For those questions that remain, we will answer them for you when we see you next.
locations

City facilities, country values

Our locations are Albury Wodonga and Wagga Wagga, two of Australia’s largest regional centres. With country values, comes a community inspired spirit that will set you at ease from the moment you contact us.

But our country locations do not mean we forgo anything. Our modern facilities are world class and our pregnancy results are among the best in Australia.
Reproductive Medicine’s committed medical team

Our emphasis is on safe treatments to aid the development of a normal, low-risk pregnancy.

This outcome is supported by a professional team who provide personalised care. Our specialists individually assess your chance of achieving a successful pregnancy and support you through your infertility treatment cycles.

Accessing treatment through our clinic will help couples:
- Reassess their fertility plans
- Understand the reasons for their difficulty in conceiving
- Gain evidence based assessment of their pregnancy chances taking into consideration their age and their infertility cause
- Understand that the treatment process may involve a series of procedures over many months.

To reduce the stress that you may experience while undertaking planning and treatment for your infertility, we aim to provide services that will minimize the time spent away from other commitments.
Services provided for infertile couples

1. Medical consultation, assessment and advice
2. Diagnostic ultrasound
3. General gynaecological and infertility treatment
4. Advanced laparoscopic surgery
5. Specialist assisted reproductive technology
   - Ovulation Induction
   - Intra-Uterine Insemination (IUI)
   - Donor Insemination (DI)
   - Donor Insemination for single women
   - Donor Egg and Embryo donation program
   - In Vitro Fertilisation
   - Intra Cytoplasmic Sperm Injection (ICSI)
   - Embryo freezing/Frozen Embryo transfers
   - Sperm freezing (sperm storage)
   - Semen analysis
   - Testicular needle biopsy
   - Sperm retrieval techniques
   - Blastocyst Culture & Freezing
6. Specialist infertility counselling
appointments

Identification
Reproductive Medicine has procedures and processes in place to reduce risk in all that it does. This includes positively identifying patients at various stages of their visits and treatment. On registration you will be required to provide three points of ID which will include at least one form of photo ID. Please expect to be asked your name, date of birth and address on all occasions, and to present your Medicare card at all monitoring appointments both at a Reproductive Medicine clinic or at an external pathology collection centre.

Making an appointment at Reproductive Medicine
Once it becomes necessary to seek fertility advice, your first step will be to get a referral, for yourself and your partner. You can contact Reproductive Medicine for an appointment and bring your referrals with you on the day.

Your referral will allow you to claim a rebate from Medicare.

It is important to know a referral from a GP is valid for 12 months.
A referral from a specialist will only remain valid for 3 months.

For most fertility patients we will require a semen test to be performed prior to the appointment. This will be arranged by the administration staff when making the initial consultation.

Your first appointment with Reproductive Medicine
At your first appointment, your infertility specialist will assess both of you and organise any tests required. You will be advised of any choices available with your special circumstances in mind.

Any previous history will be reviewed. If you have the results of relevant tests performed prior to contacting our clinic, it would be advisable to bring them with you.

Immediately after your specialist assessment, you will see an infertility nurse coordinator. We will be able to answer any questions you may have. We will explain the procedures involved in your treatment plan.

You will be given financial advice and a written quote explaining Medicare rebates and out-of-pocket expenses.

Further appointments will be scheduled as necessary
Further contact with Reproductive Medicine

Either of our clinics can be contacted between 9:00am - 4.45pm.

Our reception staff will organise a phone appointment with an infertility coordinator to guide you through your treatment cycle.

All results can be accessed by phoning our clinic, this includes pregnancy test results.

Translating and Interpreting Services

If you feel, due to any language barriers, that you would benefit from having an interpreter present to assist you with any of your appointments and further understanding of the treatment you will be undergoing, then we suggest you contact ‘The Language Services Division’ of the Community Relations Commission. This is a government body which can offer assistance in over 100 languages and dialects. You can either call 1300 651 500 or view their website for further information: www.multicultural.nsw.gov.au/our_services/interpreting_translation/

Alternatively you can contact us and speak with a staff member who will guide you through the process of engaging an interpreter. Please note that if you decide to use this service it must be booked in advance and must be coordinated to work in with your appointment times. This is not necessarily a free service and fees may apply accordingly.

After hours contact

Our after hours mobile phone number is provided for urgent matters that occur out of normal office hours. This number is 0412 692 000. Please call 000 for all medical emergencies.
Counselling is available for all treatments at Reproductive Medicine. Some treatments have elements of compulsory counselling.

Patients at Reproductive Medicine may choose to access counselling to support them during their treatments. Counselling is provided by a qualified Psychologist.

Counselling costs are included in some treatment programs. You can find out any costs involved by speaking with a coordinator.

Access to the counsellor is through referral by your doctor, coordinator or self referral. We believe that infertility counselling can be an important component of the service we offer.

Infertile couples may go through a range of emotions which include denial, confusion, anger and isolation. Counselling may help cope with the feelings infertility creates. Sometimes, just hearing how others have coped can help. To actually be told by a counsellor that your feelings are normal may alleviate stress.

Although counselling is not mandatory in every treatment program, it may be appropriate at certain vulnerable times. These include:
- Following diagnosis
- When deciding whether to pursue treatment
- When deciding to finish treatment
- When a cycle of treatment ends with an unfavourable outcome
When a treatment program has been established, but a pregnancy has not yet been achieved, it might be time to discuss the feelings that are arising. It may be that people decide to place a time limit on the situation or take a break from treatment or discuss different treatment options and how they may affect their lives.

People react in many different ways and it is not unusual to find one or both partners expressing such feelings as guilt, anger and ambivalence. Conflicts with your partner are not uncommon.

Understand that some people prefer to ponder their thoughts alone, while others prefer talking through the problem. Different coping skills and strategies may be discussed eg. relaxation training for any anxiety concerning procedures, or cognitive training to overcome a loss of confidence that commonly accompanies infertility.

Deciding to stop treatment can be a difficult time for some people or it may occur naturally. One partner may feel the need to move on, whilst the other does not. The counselling process is an exploration of issues and an opportunity to be reassured about the normality of the emotional effects.

**Compulsory counselling - donor eggs, embryos, sperm, surrogacy**

All clients donating or receiving donor gametes (eggs, sperm, embryos) or planning surrogacy must see our counsellor. This is a mandatory requirement when donor gametes are involved. The counselling service can be accessed by appointment made through reception.

Counselling is confidential and tailored to the specific needs of the individual or couple. Government legislation will be discussed. Multiple counselling sessions may be required prior to commencement of treatment. It is often difficult to discuss such personal issues with others and our trained counsellor is aware of the likely emotional impact at each step.

There are some specific issues that donor recipients need to be made aware of and for these people two counselling sessions are mandatory. Some of these issues are controversial ones and it is vital that recipients are exposed to the pros and cons of their decisions and supported through them.

**Crisis counselling**

There may be times when you feel particularly distressed before, during or after a treatment cycle, for example, following a negative pregnancy test, miscarriage or cancelled cycle. Telephone counselling or one-on-one counselling is available to assist you at this time.
Psychological/Emotional Emergencies

In the events of a severe psychological emergency patients are advised to contact the Acute/Crisis team of the Albury Wodonga Health- Adult Community Mental Health Services which is available 24 hours a day, 7 days a week by phoning 1300 881 104.

If a patient experiences a psychological or medical emergency during normal working hours he/she may contact Reproductive Medicine, informing the receptionist it is an emergency and talk to a nurse coordinator. Other options to contact are: Lifeline 13 11 14 | Beyond Blue 1300 224 636.

Things to remember

- Grief and anxiety are common responses to fertility problems and treatment. While it may be unrealistic to expect that you will immediately overcome these feelings, you can work toward managing them.
- You need to ensure that you maintain realistic expectations.
- Many people place a lot of pressure on themselves and feel that they should be coping better. Different things may work for you at different times.
- It is a natural response to feel a range of emotions when treatment is over, ranging from feelings of grief and disappointment to anger if treatment is unsuccessful. In time and with support, this will ease.
- It is also quite common for people to experience feelings of anxiety when they have a positive pregnancy test.
- You do not have to wait until a crisis occurs to access counselling. Many people find it helpful to come before they experience any distress to learn new coping strategies and plan on how best to manage their treatment cycle.
- If you would like to discuss further strategies, please contact your local counsellor to arrange an appointment.

Support Groups

ACCESS is a non-profit, consumer-based, independent national support group that is committed to promoting the wellbeing of infertile couples. For more information visit their website at www.access.org.au or phone 1800 888 896.
Fertility rates/pregnancy rates in the general population

The pregnancy rate in the general population is 20% per month. This means that the average time taken to conceive is 5 months and 85% of couples conceive after 1 year.

15% of achieved pregnancies will end in pregnancy loss because of miscarriage or ectopic pregnancy.

Some couples who are not quite as fertile may take longer to achieve a pregnancy, although they are still able to do this without ever having fertility treatment.

Some factors known to affect normal fertility rates

- A previous pregnancy means there is more chance of having another pregnancy, unless circumstances have changed.
- The shorter the length of subfertility, the higher the chance of pregnancy without treatment. Of course the reverse applies too.
- A woman’s age is important. Fertility declines with age. Women around 40 years old are generally less fertile than those around 30 years old.
- Contrary to common belief, couples should not abstain from intercourse to build up sperm numbers. Where spontaneous pregnancy is possible couples should have intercourse often around a woman’s fertile time.
- Smoking more than 15 cigarettes a day significantly reduces a woman’s fertility and reduces a man’s sperm count.
- Excessive alcohol or other drugs will reduce fertility in both men and women.
Normal conception

Normal conception is most likely to result if intercourse occurs around the time of ovulation. Mucus around the opening of the cervix becomes thin and clear at this time, and stores the sperm.

Sperm are then slowly released into the uterus where they make their way into the fallopian tubes. There, they meet an oocyte (egg) that has been released from the ovary and picked up by the sticky, finger-like ends of the fallopian tubes called the fimbriae.

The sperm then penetrates the shell of the oocyte and fertilises it.

During this process the chromosomes of the oocyte and sperm combine and one cell is formed which contains chromosomes from both partners. This cell then divides to become an embryo.

During the initial stages of division, the embryo (2-cell, 4-cell, 8-cell etc) remains in the fallopian tube. After 2-5 days when the embryo is at a more advanced stage it implants in the lining of the uterus.
Reproductive Medicine - Statistics

Pregnancy rates at Reproductive Medicine are some of the best in Australia.

We have seen constant improvements in pregnancy rates due to the continuing quality systems we have introduced. We expect a further improvement in results as technology continues to improve.

Results are reported as ongoing pregnancies per embryo transfer (IVF/ICSI and Freeze Thaw).

Please see website www.reproductivemedicine.com.au for up to date pregnancy rates.
Pre pregnancy nutrition and lifestyle choices

Prior to embarking on any fertility treatment it is important to establish optimal health. Healthy diet, vitamin supplements and exercise can all contribute to a healthy lifestyle.

Studies show that supplements of some vitamins and minerals may help to achieve better general health which may increase the chance of falling pregnant. Some of these supplements also have been proven to reduce the incidence of birth defects (eg. Folic Acid, Iodine and Iron supplements). The formula you choose should not have high doses of Vitamin A, as high doses can cause developmental deformities.

Couples need to continue their normal lifestyle of work, recreation, social enjoyment and sex. There is no evidence that the woman stopping work or ceasing normal levels of exercise increases the chance of a successful pregnancy.

Avoidance of cigarettes and alcohol in excess is recommended as they may decrease the chance of pregnancy.

You should inform the clinic if you are exposed to, or are taking, any medication, herbal remedies or other drugs.

Age related risks

As women approach 40 years of age the risk of chromosomal abnormalities (eg. Downs Syndrome) increases and fertility declines.

There are tests available during pregnancy to detect these abnormalities:

**Screening Test**
Combined Screening. This consists of a blood test at 10 weeks and an Ultrasound at 12 weeks of pregnancy. This test detects 85% of Downs Syndrome pregnancies.

**NIPS (Non-Invasive Prenatal Screening)**
This consists of a blood test from 10 weeks. This test detects 99% of downs syndrome pregnancies, but not structural abnormalities. An ultrasound at 12 weeks is still recommended.

**Definitive Testing**
1. Chorionic Villus Sampling (CVS) - performed at 10-11 weeks
2. Amniocentesis - performed at 14-18 weeks

Please feel free to discuss these issues with us and ask for a brochure.
Pregnancy benefits of folate

During the early stages of pregnancy the spinal cord and brain of the developing fetus is established. Recent research has shown that inadequate supply of Folic Acid (one of the Vitamin B Groups) prior to conception and during the early stages of pregnancy can prevent the normal development of the spinal cord and brain, causing a Neural Tube Defect known more commonly as Spina Bifida. Many babies with Neural Tube Defects die, others will suffer many health and neurological problems which will reduce their quality of life.

All women who are planning a pregnancy need Folate, but because many women do not know when they will fall pregnant they should make sure of an adequate Folate intake, either by foods rich in Folate or by taking a Folate supplement. It is recommended to have 800 mcg (micrograms) of Folate each day. You can purchase Folate without a prescription from pharmacies, supermarkets and health food stores.

You should start taking Folate several months before conception. A diet rich in Folate will include a wide variety of vegetables, fruits, legumes, wholegrain breads and cereals.

Women who are at increased risk of having babies with Neural Tube Defects are women who:
- Have already had a baby with Spina Bifida
- Women who themselves have a Neural Tube Defect
- If you have a close relative with a Neural Tube Defect
- Have Diabetes

Women who are at an increased risk are recommended to take 5mg of folate. Please discuss this with your specialist.

There are tests available during pregnancy to check for Spina Bifida and other Neural Tube Defects in your baby. Discuss this with your doctor.

NB. Women who are taking medication to prevent epilepsy should only take Folic Acid as advised by their doctor.
Benefits of Iodine

Mild to moderate Iodine deficiency during pregnancy can result in the baby having learning difficulties and affect the development of motor skills and hearing.

Women should take iodine supplements from the point of planning pregnancy through the full duration of pregnancy and breastfeeding. If pregnancy is not planned, women should start taking an iodine supplement as soon as possible after finding out that they are pregnant.

It is recommended that women take an iodine supplement of 150µg each day. Supplements of 150µg/d of iodine are safe and effective for pregnant and breastfeeding women.

Women with pre-existing thyroid conditions should seek advice from their medical practitioner prior to taking a supplement.
Vitamins for woman

There are several products that will deliver the recommended daily intake of vitamins and minerals for women. Examples of these include Elevit and Blackmores Pregnancy. We would like you to continue some form of vitamin supplement until you are successfully pregnant and then you should discuss your pregnancy supplement requirements with your general practitioner.

Vitamins for men

Research has shown that antioxidants help mop up the free radicals in the male system. This may be particularly helpful for men where there is male factor infertility or even just to maintain normal sperm activity. Free radical damage is promoted by lifestyle (poor diet, alcohol, smoking) and environmental factors (pollution, pesticides).

Antioxidants protect the system from the effects of the free radicals. Menevit is a product which contains all the antioxidant requirements for men.

Smoking

Reproductive Medicine advocates that both men and women STOP smoking, as it is very likely to reduce your chance of a successful pregnancy. It has been proven that smoking may cause:
- Increased incidence of miscarriage
- Poorer response to medication used in fertility treatments
- Damage to sperm DNA
- Reduced sperm count
- Reduced general health

You are going to embark on an extensive and emotionally demanding course of fertility treatment. It is essential that you do all you can to help yourself, and giving up smoking is a great place to start. For help, phone Quitline on 131 848.
Alcohol

Be moderate with alcohol intake. If you do drink have at least 2 alcohol free days a week.

Recreational Drugs

Should not be used at all.

General nutrition and healthy eating

You can access information about healthy eating by visiting:
- www.health.nsw.gov.au
- www.nutritionaustralia.org

If you would like more personalised advice Reproductive Medicine can refer you to a dietician.
Our approach to your privacy

The provision of quality health care is our principal concern. It requires a doctor-patient relationship of trust and confidentiality. The treatment of infertility involves a multi-disciplinary team of doctors, nurses, scientists and counsellors working towards the desired outcome. All require some degree of access to your personal information which they regard as confidential and only collected with your consent.

Your personal information is handled in accordance with our privacy policy and in compliance with privacy legislation. You are entitled to know what personal information is held about you, how you may access it, why it is held, how it is used, to whom it may be disclosed and when consent is required for this purpose. Every effort will be made to discuss these matters with you at the time that the information is collected.

Collection, use and disclosure of your information

Information about your medical and family health history is needed to provide the most accurate diagnosis and appropriate treatment.

A quality assisted reproduction program requires appropriate knowledge of your health information by all members of the team. Some information is also provided to Medicare and private health funds, if relevant, for billing and rebate purposes.

Our accrediting body, the Reproductive Technology Accreditation Committee (RTAC) or a third party appointed by them, also has access to your records to validate the appropriateness of your treatment. Members of RTAC sign a confidentiality agreement with Reproductive Medicine. Non-Identifying information is also collected and reported to the Australia & New Zealand Reproduction Database (ANZARD) for the reporting of results of treatments for Assisted Reproductive Technology in Australia.
In the majority of cases, the diagnosis and treatment of infertility involves two partners. It is our policy to disclose all necessary information to both partners. There are circumstances where your doctor is legally bound to disclose personal information.

Examples include mandatory reporting of communicable diseases and the provision of details of your treatments (without your name) to the National Perinatal Statistics Unit (NPSU).

**Your access to the information**

You have a right to access your information. You may view it or ask for a full copy or partial copy of it. In rare circumstances access may be denied in which case you would be given a reason and have a right of appeal. Depending on the nature of the access a charge may be payable where the clinic incurs costs in providing access.

If you find that the information held about you is not accurate or complete it is your right to have the information amended accordingly. Upon request health information held about you by Reproductive Medicine will be made available to other health service providers.

**Complaints**

It is important to us that your expectations about the way that we handle your information are the same as ours. Please do not hesitate to discuss any issues related to the privacy of your information with your doctor or any member of Reproductive Medicine Albury or Reproductive Medicine Wagga.

If you wish you may seek further advice by contacting the Federal Privacy Commissioner:
Level 3, 175 Pitt Street, Sydney NSW 2000.
Privacy Hotline: 1300 363 992
Website: www.oaic.gov.au
Patients Rights and Responsibilities

We are committed to providing the highest level of professional care and treatment for women and men using Assisted Reproductive Technologies.

Patients have a right to:
- A high standard of professional care from competent and appropriately qualified staff
- An environment that facilitates open communication that is supportive, friendly, respectful and relaxed
- Be informed about their treatment and to make individual choices relating to care
- Be supported in those choices
- Be informed about the facilities, services, costs, medications and methods of treatment
- Privacy and confidentiality of information and communications provided
- Give feedback, both positive and negative, and have this information addressed.
- Patient complaints or compliments can be submitted in person at the clinic.

Patients also have responsibilities which include:
- To treat staff and other patients courteously and with respect
- To respect the rights and privacy of staff and other people using the services
- To provide accurate information regarding personal circumstances, health and medical history
- To understand their treatment, its risks and ask any questions they have
- To follow instructions regarding their treatment
- To keep personal details held up-to-date including changes to personal details after treatment if they have stored gametes or embryos
- To provide notification of any alteration in treatment choice and conditions
- To attend their appointments and inform staff in a timely manner if they need to change their appointment.
reasons for infertility

Female Factor Infertility

Ovulation disorders

Women who have ovulation disorders (meaning the ovary does not release an egg regularly) often present with an absence of periods (amenorrhoea) or infrequent periods (oligomenorrhoea).

In many of these cases, treatment with fertility medication alone can be effective. Because 80% of all pregnancies on this treatment occur within the first 3 months of ovulating, the treatment should be reviewed if it has not worked after 6 months.

A more involved treatment course of daily injections with Follicle Stimulating Hormones (eg. Gonal-F, Puregon) is used in women who do not respond to treatment. This is highly successful with up to 90% of women conceiving within 9 months of treatment.

Multiple pregnancy with the use of these hormones is an ever-present risk. The treatment requires careful monitoring.

Tubal blockage

Tubal blockage can occur as a result of previous sterilisation, previous abdominal or pelvic surgery or from a pelvic infection.

Prior to IVF, tubal surgery was the only option available for women with this cause of infertility. Reversal of sterilisation operations have between 60% and 90% chance of a successful pregnancy within 1 year. Tubal surgery performed for blocked fallopian tubes generally has a very low success rate of about 10% per year, and has an increased risk of tubal ectopic pregnancy. IVF bypasses the fallopian tubes and is often a better solution than tubal surgery.
Uterine causes

Forgotten IUDs, adhesions, polyps, fibroids in the cavity of the uterus and tissue from a previous pregnancy loss or termination can all cause failure of an embryo to implant.

These conditions are diagnosed and treated by performing a surgical procedure called a hysteroscopy. The success rate will depend on the cause of the uterine problem.

Endometriosis

This is a difficult condition to describe and explain. It occurs when the lining of the uterus develops in areas outside the uterus and it may result in damage to some of the pelvic organs. In severe cases, the ovaries and tubes may be stuck to each other and to other structures in the pelvis such as bowel, uterus and bladder. The ovaries may contain cysts with old chocolate-like altered blood in them and these cysts may need to be removed.

Endometriosis can be associated with infertility and IVF may be required to achieve a pregnancy.

PCOS (Polycystic ovaries)

When you have PCOS, the hormone activity becomes irregular because ovulation is not occurring in an expected way. The body is given mixed signals and the menstrual cycle is disrupted. The high levels of androgens can cause ovulation to become irregular and even stop.

Not all women who have PCOS will have fertility problems and some will have children naturally without any medical treatment.
Obesity

Obesity can be the cause of menstrual irregularities and reduced fertility. Studies have shown that a weight loss of as little as 2kgs can be enough for some women to start menstruating regularly.

Reproductive Medicine has access to a range of professionals such as counsellors and dieticians who can help you begin a weight loss regime.

The following points are some good reasons for you to start thinking of ways to lose weight before attempting a pregnancy.

Obesity is becoming one of the most common high risk obstetric factors, with an increase in maternal and infant medical complications.

Obesity is also a risk factor for:
- Gestational diabetes
- Hypertensive disorders
- High rate of Caesarean deliveries
- Higher risks of anaesthetic complications
- Higher rates of post delivery complications eg. clotting problems and incontinence
- Overweight women have a higher risk of having large babies leading to on-going health problems for those babies born
- Admission rate of infants to intensive care is 5 times higher in women who were overweight before being pregnant

If you are in the high risk category it may be recommended that you seek advice from an obstetrician before undertaking treatment.

Unexplained infertility

As the name implies, this is an inability to conceive when after full investigations, no medical cause has been readily found.

However, this does not mean that the cause is psychological or that the couple is trying too hard. Although psychological issues may play a role in infertility, we feel that in most cases unexplained or poorly explained infertility probably means that our tests are insufficiently sensitive to diagnose the problem.
male infertility

Male factor infertility

The causes of this are not always known. It is assessed by a semen analysis which measures sperm count, motility, shape and presence of antibodies. In general, the more abnormalities found, the less fertile the semen sample. However there are naturally fertile men with low semen counts and infertile men with apparently normal samples.

Sperm quality varies from sample to sample and often deteriorates following acute illness, so impairment of male fertility should not be diagnosed on examination of a single sample.

Men who have had a vasectomy may have their fertility restored by microsurgery. Sperm reappear in about 70% of cases, but half of these have high levels of sperm antibodies which vastly reduces the capability of the sperm to fertilise an egg. Since 1993, a method of sperm micro-injection has been used which involves the injection of a single sperm into the egg. This method is called Intra Cytoplasmic Sperm Injection (ICSI) and has proven to be very successful.

Couples where the man has very low sperm numbers and who would not be offered treatment with other IVF methods can now achieve good results with ICSI.

**Intra Cytoplasmic Sperm Injection (ICSI)**
Semen analysis

A semen analysis measures several parameters:

i) Volume of ejaculate produced

ii) Count/Concentration
   This is an accurate measure of the number of sperm in an ejaculate and includes dead sperm.

iii) Motility
   An accurate measure of the motility (moving sperm) is assessed. For the normal semen profile, this reflects the number of live sperm in the ejaculate.

iv) Morphology
   This test assesses the number of normal sperm in both shape and size within the ejaculate. Abnormal sperm do not cause abnormal babies or miscarriage and abnormal sperm do not fertilise eggs.

v) Immunobead test
   Antibodies may be present in either the seminal fluid or in the serum (blood) of men and women. This is often a problem following vasectomy reversal. Antibodies may bind to the head or the tail of the sperm and stop the sperm from fertilising the egg.
**Commonly asked questions by males**

**Q** Why do I have a semen analysis done at Reproductive Medicine when I’ve I’ve had one done elsewhere?

**A** The standards vary from laboratory to laboratory and the test at our laboratory is performed by specialist embryologists. You have been referred because of a fertility problem and we need a high standard semen analysis so that we can give you accurate advice.

**Q** How can I be infertile when I have 20 million sperm in my ejaculate?

**A** The semen analysis is made up of several measurements. The count assesses all sperm in the ejaculate, regardless of whether they move or whether they have a normal structure. Some infertile men have high numbers of immotile or abnormally shaped sperm (abnormal morphology).
Q  My count is very low; won’t it be better if I save up for a couple of weeks?

A  No. In fact, three days abstinence yields the peak number of motile (swimming) sperm in the ejaculate. Longer than this and the motility may decrease faster than the rate of production. For men with low motility it may in fact be beneficial to ejaculate daily on every second day prior to giving a specimen for semen analysis or for IVF. Please feel free to discuss this with the nurses or scientists prior to beginning your treatment.

Q  Why can’t I produce at home and then bring the sample?

A  The scientists need to begin the preparation of the sperm within one hour of ejaculation. In some cases, the specimens may be produced at home and brought in, if travelling time allows and if this has been previously arranged with the scientists.

Q  I have difficulty producing by masturbation. Can I produce by having intercourse with withdrawal? Can I produce by intercourse wearing a condom?

A  The shortest answer to this is that any sperm is better than no sperm. However sperm collection by either method means that the sample is contaminated with large numbers of cells and debris (usually from the skin or from within the vagina). This, particularly for the poor semen profile, makes it extremely difficult to rescue good motile sperm. Further, most condoms are sperm toxic, but if sperm collection cannot be achieved by any other means, the scientists can provide you with a non-toxic condom.

Q  Can I use a lubricant?

A  No. Most lubricants are sperm toxic and many of them will leave a residue in the specimen that makes it extremely difficult to process the sample.

Q  I collected all the specimen but missed the first bit. Does this matter?

A  Yes. The first portion of the ejaculate often contains most of the sperm.
**Q** Can I have my sperm frozen prior to our first treatment in case I cannot produce on the day?

**A** Yes, that is possible. This will incur a fee.

**Q** What happens to my sperm when it is stored?

**A** The sperm are mixed with a special `antifreeze` solution which protects them from damage during the freezing process. This mixture is placed in plastic straws clearly labelled for accurate identification, and frozen in liquid nitrogen. The straws are then placed in special storage containers filled with liquid nitrogen until they are needed.

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**Testicular biopsy and Percutaneous Epididymal Sperm Aspiration (PESA)**

When a man has no sperm in his ejaculate, yet testing and examination suggests that there may be sperm in the testes, then the procedure of testicular biopsy or PESA may be of help to the couple.

The procedure of testicular biopsy is performed with a fine needle. This involves placing a fine needle into the testes and withdrawing some of the tubules from within the testes which contain live sperm. The procedure is performed under local anaesthesia.

The procedure of Percutaneous Epididymal Sperm Aspiration (PESA) is done by passing a fine needle into the epididymis and aspirating sperm from the epididymus.

The man may feel some discomfort in the 24 hours following these procedures, but simple pain killers, like Panadeine, are usually sufficient to overcome this.

Testicular biopsy and PESA do not allow enough sperm to be obtained to use with IUI. ICSI must be performed in order to fertilise the egg (refer to page 29).
Testicle Biopsy

Percutaneous Epididymal Sperm Aspiration (PESA)
It is important for couples considering fertility treatment to understand as much as possible about their options and to be well informed about each procedure. You should try to discuss with your doctor and staff at our clinic what is involved with each treatment, and understand which is most suitable for your personal situation. The following pages will introduce you to the various fertility treatments and explain why certain techniques are preferable for different patients. More detail about what to expect in your treatment is provided later in this booklet.

**Ovulation Induction**

When ovulation is not occurring regularly, but everything else appears to be normal, ovarian stimulation medication can be used to promote the growth of a follicle and cause release of a mature egg (oocyte). Your stimulated cycle is monitored by blood tests and ultrasound, and ovulation may be initiated by an injection. You will be advised of the best time to have intercourse.

The chance of a multiple pregnancy increases using this method of assisted fertility. The likelihood of twins is approximately 10-20% with each pregnancy. This may not suit your personal circumstances and a cycle may be cancelled if it appears that too many follicles have been produced.

This form of treatment is only recommended 3-4 times before further review and planning with your specialist.
intra-uterine insemination (IUI)

IUI is a treatment where the semen which has been prepared in the laboratory is inserted via a fine tube directly into the uterine cavity at the time of ovulation. Only the actively motile sperm are inserted and the cervical mucus is bypassed.

Ovulation is detected with either ultrasound examination of the ovaries or with urine testing of lutienising hormone levels.

You should abstain from intercourse for 2 - 3 days (and a maximum of five days) prior to expected ovulation. This date (or day of your cycle) will be estimated when we see you to plan your treatment.

A serum progesterone will be carried out at a laboratory closest to you, one week after ovulation, to confirm that an egg was released.

If you are not pregnant from any given cycle of treatment, you can expect a period within 14 days of treatment after IUI.

This form of treatment is only recommended 2-3 times before further review and planning with your specialist.
Information and discussion
A typical IVF treatment cycle consists of:
- Information and discussion
- Pre-treatment tests and preparation
- Stimulation and monitoring of follicle growth
- Oocyte (egg) retrieval
- Sperm collection
- Insemination, fertilisation and embryo culture
- Embryo transfer
- Embryo freezing
- Pregnancy testing

IVF means In Vitro Fertilisation. This is where the fertilisation of the egg by the sperm takes place literally in glass (In Vitro) outside the body, in our laboratory. Your IVF specialist will discuss your infertility with you in detail. If the decision has been made to proceed to IVF or a related procedure you will be given verbal information during the consultation about the procedure you will have, the likely effects and the success rates. You will then see a nurse coordinator.
Pre-treatment tests and preparation

Prior to starting treatment both partners will have a check for blood groups, Hepatitis B, Hepatitis C, HIV and Vitamin D. Rubella immunity, chlamydia and anticardiolipin antibodies will also be checked in women.

An up-to-date semen analysis will be arranged with our laboratory.

Stimulation and monitoring of follicle growth

We aim to use a combination of drugs to stimulate the ovaries so that you may develop a number of follicles. We can then recover eggs from these follicles for fertilisation and embryo development.

The drugs used will be chosen to suit what we believe to be your clinical needs. We will assess your age, infertility type and previous responses to IVF treatment (if applicable).

Injections usually span a 7-12 day period prior to the ultrasound. The ultrasound scan takes about 10 minutes depending on the number of follicles to be measured. It is important to remember that the ultrasound cannot determine if there is a healthy egg in the follicle, as these eggs are microscopic.

The average number of eggs we retrieve is 10 but this can vary.

A cycle may be cancelled if egg numbers are predicted to be greater than 20. Please see section on OHSS for further explanation.

Following the ultrasound a blood sample may be collected for hormone assessment. This is to detect the possibility of a woman starting her own ovulation process before we give the hCG trigger injection.

By using this information and the number of days of stimulation which you have had, we can best decide the most appropriate day for retrieving the eggs for fertilisation.
**Oocyte (egg) retrieval**

This is a surgical procedure performed at the Day Surgery. Our staff will advise you of your admission time and you will need to have fasted for the previous six hours.

Arrangement will be made for the semen collection and the semen sample will be given to the scientists.

In theatre the gynaecologist will guide a needle through the vagina into the ovaries and proceed to empty the fluid from the follicles. This fluid is then passed through to the scientist who, using a microscope, will search for the eggs. The procedure lasts about 20-30 minutes.

The woman is then taken back to the recovery area and typically is able to leave hospital 1-2 hours later.
**Semen collection**

A semen sample is required, or in some cases, more than one sample is necessary on the day of the egg collection.

It is important to re-emphasise here that if the man anticipates having any problems with collecting the specimen he should speak to the coordinator well before the day of egg retrieval so that alternative arrangements can be made. If necessary, a special condom can be used which does not harm the sperm, or semen can be frozen and stored as a backup.

**Insemination, fertilisation and embryo culture**

Once the eggs have been collected, they are placed in culture dishes in the incubator. When the sperm sample has been collected, the scientists separate the more normal and more motile (moving) sperm. These sperm are used for the insemination.

The day after insemination, the eggs are checked to confirm that fertilisation has occurred. 70% of eggs will usually become fertilised eggs. Most of these fertilised eggs will divide over the next day to form a 2 or 4 cell embryo, but some will not go on to form embryos.

An IVF scientist will phone you the day after the egg retrieval to give you the fertilisation details and arrangements for the embryo transfer.

**Oocyte (Egg) Retrieval**

www.reproductivemedicine.com.au
Embryo transfer (ET)

This simple procedure is performed at the Day Surgery. The embryos are transferred into the cavity of the uterus using a very fine catheter which is passed through the cervix (neck of the uterus). This procedure is normally no more uncomfortable than a pap smear test and no anaesthetic is required. It helps if you empty your bladder just before the embryo transfer is performed. Your partner may be present at the embryo transfer.

You should be able to leave Day Surgery 10-15 minutes after this procedure is performed and you should be able to return to work that day.

There are no special precautions you need to take over the next two weeks.
Blastocyst embryo culture and transfer

Culture of embryo to blastocyst stage prior to transfer is a technique developed for IVF that has the potential to improve the likelihood of pregnancy whilst minimising the risk of multiple pregnancies.

What is blastocyst?

When an egg is fertilised it becomes an embryo. Embryos grow by means of cell division. At about day 5, following many cell divisions, the embryo becomes a blastocyst and has a high potential to produce a pregnancy. However, not all embryos will develop to the blastocyst stage.

What are the advantages of blastocyst culture?

When there are sufficient embryos, blastocyst embryo culture and transfer is more likely to lead to a pregnancy because the process of culturing embryos to day 5 enables the embryologists to observe and select the best embryos for transfer.

Policy on transfer, freezing and storing embryos

The maximum number of embryos that we will transfer in the first embryo transfer cycle for women under the age of 36 is one. This is in accordance with the guidelines of the Reproductive Technology Accreditation Committee.

For subsequent cycles we will discuss with you whether 2 embryos would be appropriate. Cryopreservation (freezing) of embryos allows any remaining embryos to be frozen and stored for future use if so required rather than being discarded.

The advantages of cryopreservation of embryos are:

i) It allows an increase in the pregnancy rate per stimulation of ovaries/egg pick up cycle without increasing the multiple pregnancy rate

ii) It lessens the number of times the ovaries undergo stimulation and the number of hospital attendances for egg pick up procedures

iii) It often lessens the cost of achieving a pregnancy.
The disadvantages of cryopreservation are:

i) If you become pregnant and still have embryos in storage, you will need to decide what to do with the embryos at a later date

ii) Legal problems may occur when embryos are in storage and death or divorce occurs. This is covered in our consent form for your guidance and you will need to predetermine the fate of your frozen embryos when you sign your freezing consent.

You will receive a letter from us confirming the number of embryos frozen.

Pregnancy testing

Arrangements will be made for you to have a pregnancy test performed on the appropriate day after embryo transfer. This test should be done even if bleeding has occurred because some pregnancies can continue despite vaginal bleeding. Importantly, some women can have an ectopic pregnancy following IVF and embryo transfer and have what seems to be a normal period. If you do not have the pregnancy test we will not be alerted to the possibility of an ectopic pregnancy.

If you are using Crinone, progesterone pessaries and/or hCG injections post embryo transfer, you may not have had a period by the time your pregnancy test is done. This is because the function of these drugs is to support the lining of the uterus thus sometimes preventing a menstrual period from occurring.

Positive pregnancy test

For those who become pregnant, ultrasound examination will be arranged for a date three weeks after the positive pregnancy test.

This ultrasound scan is to determine that there is a viable (living) pregnancy inside the uterus. About 18-20% of all pregnancies diagnosed on a blood test will be found to be non viable. This is due to either the embryo not having developed or the embryo having developed to a certain stage only.

Negative pregnancy test

Should you not be pregnant you may wish to wait a while before undertaking further treatment. A feeling of disappointment and sometimes despair is common at this time and this is one of the important times for you to feel able to call our nurse coordinators, counsellor or gynaecologist.

It is important that you have a realistic view of your chances of success with treatment.
Ectopic pregnancy

Women who have damage to their fallopian tubes as the reason for their infertility can have an increased chance of the pregnancy being an ectopic pregnancy.

Most ectopic pregnancies require surgical removal either by laparoscopy or in some more advanced cases, by open abdominal surgery. In some cases the fallopian tube can be preserved but in other cases the tube has to be removed.

When the tube is removed, it is our policy to close the end of the tube next to the uterus to minimise the chance of further ectopic pregnancy occurring.
freeze thaw cycle and embryo transfer

Natural cycle

To enable us to determine the appropriate day for replacing frozen-thawed embryos we need to confirm that ovulation has occurred. It is ovulation that is responsible for making the lining of the uterus receptive to the embryos.

Your IVF coordinator will guide you through the processes used by Reproductive Medicine to determine when the appropriate day is for embryo transfer.

Hormone replacement cycle

In hormone replacement cycles we mimic the hormonal changes occurring during a natural cycle. With oestrogen (Progynova) tablets and progesterone pessaries, it is possible to artificially create a suitable environment for the embryos. No blood tests are required in a hormone replacement cycle.

Oestrogen tablets (Progynova) are taken from day 5 of your cycle. You will have an ultrasound on day 14 of your cycle. This ultrasound will be able to confirm that the lining of the uterus (ie. the endometrium) has developed sufficiently for an embryo transfer to take place. If the lining is not sufficiently developed, the dosage of Progynova will be increased and another ultrasound performed.
possible treatment outcomes

Even with this treatment and operation/procedure being carried out with all due professional care and responsibility, there is no guarantee that this will result in a viable pregnancy. This may occur for several reasons, including but not limited to:

- inability to achieve adequate stimulation of ovaries;
- inability to obtain eggs or sperm;
- lack of fertilization of eggs;
- inadequate embryo development;
- failure of the embryo to survive the freeze/thaw process;
- failure of the embryo to implant in the uterus after transfer;
- miscarriage and ectopic pregnancy.
Cycle cancellation

For medical or personal reasons your fertility care doctor may recommend that your ART cycle be cancelled. About 5% of cycles are cancelled. Some of the more usual reasons for cancelling a cycle are:
- Your ovaries don’t produce follicles
- Your ovaries become over stimulated in response to medications
- You produce hormones in ways that will adversely affect the quality of eggs produced in that cycle or the quality of the lining of the uterus (the endometrium) to receive the embryo
- An unexpected medical event occurs
- Your own personal consideration or choice

Miscarriage

About one in five pregnancies result in miscarriage, including pregnancies assisted by fertility treatment. The most common cause is a chromosomal (genetic) defect in an embryo, and means that the embryo would not produce a healthy baby. Miscarriage is therefore nature’s way of preventing this from happening. Other causes of miscarriage include hormonal problems, infection, immune problems, uterine abnormalities and maternal illness. There is a relationship between a woman’s age and the rate of miscarriage, and as a woman ages her chance of miscarriage increases.

Ectopic Pregnancy

Ectopic pregnancy is where the embryo implants in the fallopian tubes. Even in IVF, this is a possibility and your Fertility Specialist will be able to make this diagnosis if present.
Clomiphene Citrate (Clomid, Serophene)

Clomid is widely known as the ‘fertility drug’. It is used to stimulate ovulation. We use it in IVF in combination with gonadotrophin injections. It is a synthetic hormone which, put simply, causes the pituitary gland in the brain to produce more Follicle Stimulating Hormone (FSH) than happens in the natural cycle. It causes no long term adverse effects but it does have a number of effects which some women find unpleasant during the five days of taking the drug and sometimes for a few days afterwards.

Hot flushes are noticed by some women when taking this drug. The explanation is that the drug is an anti-oestrogen which tricks the hypothalamus (a small gland in the base of the brain) into thinking that the body’s oestrogen levels are low and as such, causes the pituitary gland to release more hormones (FSH).

This, in turn stimulates the ovaries to make more eggs. The hot flushes are similar to those which women experience when entering menopause. Women seldom find this effect to last more than 4 or 5 days but a few find even this brief time unpleasant.

Mood swings may occur.

Visual symptoms of flashing lights and halos around objects are extremely uncommon symptoms. Hair loss occurs in 1 in 3000 women and is short lived.

There have been many studies over the years to see if there is any association between clomid and birth defects, but none have been found.
Gonadotrophins (Gonal F, Bemfola, Puregon)

These hormones come in the form of a subcutaneous injection (ie. an injection given just under the skin). They are a highly purified synthetic Follicle Stimulating Hormone (FSH).

The injections are given to increase the amount of Follicle Stimulating Hormone available in the woman’s circulation so that all the follicles on the ovary which are capable of growing get enough ‘fuel’ to help them continue to grow healthily.

In the natural cycle a woman’s own system would deprive all but one follicle of enough stimulation.

The major side-effect from gonadotropin injections is ovarian hyperstimulation syndrome. Some women notice pain at the injection site and a very small number will develop an itch and a generalised drug reaction rash. Please contact the clinic if this occurs.

Human Chorionic Gonadotrophin (hCG) (Ovidrel/ Pregnyl)

This is a naturally occurring hormone used in IVF as the ovulation trigger. It is sometimes used in low doses after embryo transfer to support the lining of the uterus. It is hCG which causes oocytes (eggs) to be released from the ovaries and which allows them to become fertilised. It also causes the production of progesterone from the follicle which has released its eggs.

Synarel

This drug has been used in IVF in Australia since 1987 and is used to prevent premature ovulation. Synarel is administered by inhalation as a nasal spray. Reactions to this drug are uncommon, but may include headaches and nausea.

This drug works at the level of the pituitary gland in the brain to prevent the release of the hormones which bring about ovulation.
Microgynon (Oral Contraceptive Pill)

A drug which most have used at one time or another in the past to control fertility. Although it may seem strange that we would use this drug on women who were hoping to become pregnant it is a very useful way of regulating the menstrual periods and in combination with the stimulation drugs can be used to ensure that egg retrieval happens at a predicted time. This may be prescribed to assist the planning of your treatment cycle.

Side effects may include nausea, bloating, weight gain and mood swings. Women over 37 who smoke or who have high blood pressure may not be able to take the Pill and women with a history of liver problems or thrombosis should also avoid it as a pre-treatment for IVF.

Progynova (Oestradiol Valerate)

This hormone is used in IVF to prepare the lining of the uterus prior to embryo transfer in frozen embryo hormone replacement cycles (HRT).

Side effects may include nausea and sore breasts. These symptoms are similar to those which some women experience in early pregnancy.

Primolut N (Norethisterone)

This drug has been in clinical use since the 1960s and is another drug which we use to control the cycle and likely date of egg retrieval.

Pre-treatment with this drug or the Pill is used worldwide to plan the woman’s stimulated cycle. The drug is a synthetic product which has an effect similar to that of the body’s own progesterone. It is usually prescribed for between 5-10 days at the end of the cycle which precedes treatment.

Breast tenderness, bloating and mood changes are sometimes reported. These changes are uncommon with the low dose we use and the short duration of treatment.
Progesterone (Utrogestan)

The cycle may include the use of crinone gel or progesterone pessaries. Your specialist will prescribe this vaginal preparation if indicated.

Women having freeze thaw embryo transfers and in whom an artificial cycle has been developed, must take progesterone in the form of pessaries to keep the pregnancy attached to the uterus. Once the placenta develops, the pregnancy makes its own progesterone and the pessaries are no longer needed.

Luveris injection

Luveris is a man made (recombinant) Luteinising (LH) Hormone. Women who are older than 35 years and women who have responded poorly to other stimulation protocols may benefit for the addition of LH. Studies show that in these women we may expect improvement in the number of eggs collected and an increase in the pregnancy rate.

Side effects may include rash at injection site, headaches, tiredness and nausea. It is administered just under the skin.

Orgalutran injection

May be used to try and prevent women ovulating before their egg collection (premature ovulation). It stops the hormonal changes that can cause this to happen. Side effects may be redness at the injection site, headache and nausea.

Prednisolone (corticosteroid)

This is an anti-inflammatory medication. You may be prescribed Prednisolone by your IVF specialist. Its use is based on evidence suggesting in some women the body’s defence systems may be altered and cause a developing pregnancy to be rejected. Your dose will be adjusted throughout its use to avoid common side effects which can result from long term use.

These side effects may include:

- Weight gain
- Mood swings
- Hair growth
- Sleeping difficulties
- Skin problems
Clexane

This is a drug used to reduce blood clotting activity.

A clotting factor in your blood will be checked prior to commencing an IVF cycle. Cardiolipin antibodies have been associated with recurrent miscarriages. If you have this clotting factor in your blood your specialist may prescribe Clexane for use during your IVF cycle. It is administered by injection under your skin once a day.

Side effects may include slight bruising around the injection site.

Other Prescribed/Over the Counter Medications

Please let Reproductive Medicine know if you are on any naturopathy preparation or other medications. Some remedies contain hormones which may adversely affect your infertility treatment.

Other medications

You may be prescribed medications other than those listed here. Further information will be provided to you on potential side effects and administration during your appointment.
Ovarian hyperstimulation syndrome

This is a potentially dangerous medical condition which only occurs in women who have had gonadotrophin injections for ovulation treatment or IVF. It occurs typically in women who develop a large number of follicles.

Patients at increased risk are women with:
- Polycystic ovarian syndrome (PCOS)
- Hyperprolactinaemia
- young patients, under 30 years of age
- patients weighing less than 47 kg

If the egg retrieval has taken place and a large number of eggs have been obtained, Reproductive Medicine may feel it is necessary to postpone the embryo transfer and freeze all the embryos. The embryo transfer will then occur in a subsequent menstrual cycle, when the symptoms of OHSS have settled.

OHSS severity is graded as mild, moderate or severe according to clinical symptoms.
**Mild OHSS:** Mild abdominal swelling and pain.

**Moderate OHSS:** More pronounced abdominal pain, nausea, vomiting.

**Severe OHSS:** Pronounced abdominal pain and distension, ascites, pleural/pericardial effusion, haemo-concentration, reduced urine output, electrolyte imbalance.

The aim of successful IVF is to use drugs to stimulate the ovaries to develop six to twenty follicles for egg collection. As such, we intentionally override the natural control mechanisms which limit the woman to making one follicle in her natural cycle. In our program we collect more than twenty eggs in 12% of cases and more than thirty eggs in 1%. We rarely have severe ovarian hyperstimulation occurring.

**Treatment of Mild/Moderate OHSS:** Daily contact with the nursing team and resting at home and avoiding physical stress is generally all that is required. Keeping an eye on your daily weight and urine output is usually required. Sometimes a blood test is required.

**Treatment of Severe OHSS:** This is a more serious complication that demands specialist care. Hospital admission for assessment and treatment is required.

**Assessments:**
- weight, abdominal circumference, urinary volume, blood pressure, pulse rate
- ovarian ultrasound
- blood tests

Women who develop this condition have enlargement of their ovaries. There is also a large shift of fluid from the circulation into the abdominal cavity (ascites), a decreased volume of fluid in the blood vessels and therefore an increased concentration of red blood cells which can lead to thrombosis (blood clots).

The blood flow to the kidneys is reduced and production of urine falls dramatically or ceases altogether. In very severe cases there is leakage of fluid into the chest cavity.
The condition is self limiting, resolving with the onset of the next period. It is, however a potentially serious complication of ovarian stimulation in IVF. We calculate from our figures that about one woman in every 500 in our program will develop severe ovarian hyperstimulation syndrome and require hospital admission.

All women who have had an over response to our stimulation are given a letter to take to their local doctor. This letter gives information about OHSS and encourages them to discuss their patient’s progress with our clinic.

**Anaesthesia for IVF**

IVF involves an egg collection performed under anaesthesia.

Prior to egg retrieval, women should have had nothing to eat or drink, including water, for six hours prior to their admission to Albury or Wagga Day Surgery.

All anaesthetics have risks inherent in the medical procedure and these risks include reaction to the drugs, slowed breathing and a one in 65,000 chance of death. All procedures scheduled at Albury or Wagga Day Surgery are performed by specialist anaesthetists and you should discuss your past medical history, in particular any allergies or previous anaesthetic problems, with your anaesthetic specialist.

**Infection in IVF**

Some women who undergo IVF have had some pelvic infection which may have contributed to their infertility by causing damage to the fallopian tubes. In some of these cases there may be a recurrence of the infection following egg retrieval. This is a very uncommon result of IVF treatment occurring in less than one in 1000 cases.

This problem is more common in women who have endometriotic cysts on their ovaries and in such cases we will provide an antibiotic cover during the egg retrieval.
IVF and cancer - the good news

With people living longer more women now live long enough to develop a range of cancers. In Western populations, the life time risk of breast cancer is one in 14 women. For ovarian cancer it is one in 90 and for cancer of the uterus it is one in 77 women.

It is generally accepted by medical experts that ovarian and uterine cancer are more common in women who have not had children and who are therefore likely to be infertile. A study has recently been published by the Anti-Cancer Council of Victoria, which looked at a follow up of more than 10,000 women.

Slightly more than half these women had IVF treatment with fertility drugs and slightly less than half had no IVF treatment using fertility drugs.

The major finding from that study was that these women did not have an increased incidence of breast cancer, ovarian cancer or any other form of cancer.
Multiple/Twin Pregnancies

Our approach at Reproductive Medicine is to assist you in giving birth to a child that grows up to be a healthy and able member of society. The idea of increasing your chances of conceiving by transferring more than one embryo might sound appealing, but there are increased risks that come with a multiple pregnancy. Some of the complications include an increased rate of miscarriage, premature birth, low birth weight and higher infant mortality.

Preterm birth occurs in over 50% of twin pregnancies, 90% of triplet pregnancies and virtually all quadruplet pregnancies. The average length of pregnancy is 39 weeks for a single gestation; 35 weeks for twins; 33 weeks for triplets; and 29 weeks for quadruplets. Compared to singleton pregnancies, a twin is seven times more likely, and a triplet is over 20 times more likely, to die in the first month of life. Prematurity is associated with an increased risk of respiratory distress syndrome (RDS), intra-cranial haemorrhage, cerebral palsy, blindness, low birth weight and neonatal morbidity and mortality. RDS accounts for 50% of all neonatal deaths associated with premature birth. Intrauterine growth restriction, intrauterine death of one or more foetuses, miscarriage, and congenital anomalies are all more common. The likelihood of lifelong disability is over 25% for babies weighing less than 1,000 grams when born.

Maternal risks due to multiple gestation include premature labour, premature delivery, pregnancy-induced high blood pressure or pre-eclampsia, diabetes and bleeding. Pregnancy-induced hypertension (PIH) occurs three to five times more frequently. Severe PIH may be life threatening. Premature labour requiring prolonged bed rest or hospitalisation is common. Placental abnormalities associated with maternal haemorrhage are more likely to occur. Gestational diabetes, anaemia, and polyhydramnios (excess amniotic fluid) occur more frequently. Caesarean section is often needed for twin pregnancies and almost always required for triplets. Multiple gestation is associated with more nausea and vomiting, anaemia and fatigue. After birth, multiple pregnancies are associated with increased risk of weight gain, heartburn, lack of sleep, financial difficulties, depression and marital discord.

To summarise, there are economic, medical, social and psychological hazards associated with multiple pregnancy.
Why is oocyte donation needed?

Oocyte donation has only been possible since the establishment of IVF. It offers the only means of achieving a pregnancy when a woman is unable to produce her own eggs. This may occur for the following reasons:

i) the ovaries have never developed properly (e.g. Turner’s Syndrome)
ii) premature ovarian failure (premature menopause)
iii) surgical removal of the ovaries
iv) chemotherapy has caused the ovaries to fail.

Who are the potential donors?

i) Clinic recruited donors
ii) known donors, who are a friend or relative of the egg recipient
iii) Overseas donors (The World Egg Bank - TWEB)

It is preferable that the egg donor is under the age of 35 years as the chance of pregnancy is age related. It is preferable but not essential that an egg donor has completed her own family.

Will the donor ever find out about my child or will my child ever know who the donor was?

On January 1st 2010, The Assisted Reproductive Technology Act (ART Act) was introduced. The Act requires assisted reproductive technology clinics to be registered and it establishes a donor register which, following the birth of a child born as a result of using donated oocytes, will hold information on the child and the donor.

The donor can access non-identifying information about any children born using their donated gametes, such as their sex and year of birth.

A child conceived using donated gametes will be able to access both identifying and non-identifying information about the donor, including the donor’s name and date of birth, once they turn 18.

Further information can be found by visiting www.health.nsw.gov.au and conducting a search for donor eggs.

Our mind is made up. Why do we have to have counselling before we can have treatment?

Counselling is a mandatory requirement prior to using donor eggs.
Who are the donors?

i) Clinic recruited donors
ii) known donors, who are a friend of relative
iii) Overseas donors (California Cryobank- CCB)

Sperm donors have volunteered to give their sperm specifically to help women achieve a pregnancy. They are from all walks of life but have one thing in common – they have the humanity to recognise that this is a gift which they are able to give.
The donors are screened after volunteering to donate. Only those who appear to have the most fertile semen samples are taken on as donors and after that, they must complete a lifestyle statement declaring that they have never used intravenous drugs nor engaged in male to male sexual intercourse. They must have a clean bill of health in their medical and family history in terms of inheritable conditions.

Their blood is tested for HIV (the AIDS virus), Hepatitis B, Hepatitis C, CMV, Syphilis, Cystic Fibrosis and genetic screening of the chromosomes. Their blood group and rhesus factor are also recorded. The semen is screened for infections.

Only donors who pass all these tests have their semen frozen for storage. The semen is held in quarantine for six months and the donor is retested prior to the semen being released for use.

Women who are receiving donor sperm will have access to the following information about the donor:

- Height and build
- Ethnicity
- Complexion
- Hair colour
- Eye colour
- Blood group

Donor insemination involves inseminating donor sperm into the uterus at the time of ovulation to achieve a pregnancy.

**How successful is DI?**

A normally fertile woman will have an 18% chance of a live baby following a DI cycle. Due to a decrease in the number of clinic recruited donors, the number of DI cycles we offer may be reduced.
Will my baby look like my partner?

The choice of donor is made by the recipient. These choices will be made available to you by the coordinator in our clinic. Where possible a donor with a similar ethnic origin and physical characteristics will be used.

Will the donor ever find out about my child or will my child ever know who the donor was?

On January 1st 2010, The Assisted Reproductive Technology Act (ART Act) was introduced. The Act requires assisted reproductive technology clinics to be registered and it establishes a donor register which, following the birth of a child born as a result of using donated sperm, will hold information on the child and the donor.

The donor can access non-identifying information about any children born using their donated gametes, such as their sex and year of birth.
A child conceived using donated gametes will be able to access both identifying and non-identifying information about the donor, including the donor’s name and date of birth, once they turn 18.

Further information can be found by visiting www.health.nsw.gov.au and conducting a search for donor sperm.

**Our mind is made up. Why do we have to have counselling before we can have treatment?**

Counselling is a mandatory requirement prior to using donor sperm.

**How is the treatment performed?**

DI is done by removing a straw of frozen semen from liquid nitrogen which is then allowed to thaw at room temperature.

The semen is drawn up into a fine catheter and inseminated into the uterus at the time of ovulation. Following the insemination, you should lead a normal life including work, intercourse and showering.

**Will I be able to use the same donor for a subsequent baby?**

We would like to help you with this but we cannot guarantee it. In some circumstances this is possible but not always.
IVF and the ability to freeze embryos successfully has led to the possibility and the now increasing occurrence of donating embryos. Generally, these are donated by couples who have used IVF, have completed their family and no longer require the embryos.

Donating embryos is a very simple procedure physically. However, there are many social implications and emotional reactions for the donors as well as the recipients which need to be considered carefully.

**Embryo Donors**

For the donors it may well have been difficult to decide what to do with the remaining frozen embryos. If the couple decide not to use them, they may choose to donate them to another couple. This may be an anonymous donation or a directed donation to a couple known to the embryo donors. The choice may not be easy. Many feel that donation is the best option and want to give others the possibility of pregnancy, to give something back to the program, and don’t want to destroy the embryos. However, the donating couple need to realise that if it is successful the resultant children will be full siblings to their existing children. The donor couple need to think through what they will tell their own children and how they will feel if they have questions about the donor children.

The donors need to know why they have made the decision. Some worry that they will feel they have given away their own children but usually justify this by knowing they have given a child a chance of life. It can be a very emotional issue. Reproductive Medicine encourages couples to discuss these issues with a counsellor.

**Recipients**

Likewise there are many implications for the recipients. They need to be comfortable with the knowledge that neither of them will be the genetic parents. Recipients should think through what they intend telling any children, how they will feel about questions or if their children want to contact the donors.

Most want information about the donors ages, the ages and sex of any children and any significant racial background. Embryo donation will be subject to the same identity release as donor sperm and eggs.
Social and legal concern

There is often concern by couples, both recipients and donors, who worry about the children meeting and marrying in the future. To help allay these fears, many states including NSW, have a central donor register which can be accessed by children born as a result of gamete or embryo donation.

Donating embryos is a very generous gesture. It is positive because it is giving a chance of life. All concerned need to have time and counselling to be able to think about the possible implications before a pregnancy occurs.
Adhesions
These are fibrous like strands of scar tissue which may develop inside the pelvis, abdomen or uterus after previous surgery or infection.

Amenorrhoea
Amenorrhoea is the absence of menstruation.

ART
Assisted Reproductive Technology refers to any form of medical intervention to aid in the development of a pregnancy.

Biochemical pregnancy
This is when the blood test shows that implantation and continued embryo development have started, but unfortunately, the pregnancy does not develop any further. This is not a miscarriage and a relatively normal menstrual period follows.

Blastocyst
Blastocyst is an embryo that has been cultured (grown) for 5 days and contains over 80 cells.

Chromosomes
These are the genetic material present in every cell and passed from parent to child. Humans have 23 pairs of chromosomes in each cell. However, an egg cell has only 23 chromosomes and so does a sperm cell. When the egg and sperm combine to form an embryo, the total number then becomes 23 pairs.

Cryopreservation
To preserve by freezing. It is used here to mean the freezing and storing of embryos, semen or eggs.

Curettage (Curette)
This is a surgical procedure in which the uterus is emptied by carefully scraping with a special instrument.

DI
Donor insemination.
Ectopic pregnancy
The pregnancy develops outside the uterus, almost always in the fallopian tube or tubal remnant.

Embryo
When we mention the term, we mean an egg which has fertilised and has undergone one or more cell divisions taking it to the 2-cell, 4-cell or 6-cell etc. stage.

Embryo Transfer (ET)
ET is the transfer of the embryo to the woman’s uterus.

Fallopian tubes
These are the tubes attached to the uterus through which the egg must travel to pass from the ovary to the uterus. Fertilisation normally occurs here.

Fertilisation
The time when a sperm cell and an egg cell fuse to form an embryo.

Fibroids
These are non-cancerous growths inside the uterus. They can sometimes interfere with a growing embryo due to the space they occupy.

Follicle
A fluid filled area in the ovary which contains the microscopic egg.

Gamete
A gamete is a ‘germ’ cell ie. the cell from which all others arise. This is the egg in a woman and the sperm in a man. Normal human gametes each have 23 chromosomes; when they combine at fertilisation, the newly fertilised egg has 46 chromosomes (23 pairs), half from the male and half from the female.

Gonadotrophins - Puregon/Gonal-F
For practical purposes, these all mean the same thing. The last two are trade names for gonadotrophin drugs. These are a highly purified synthetic Follicle Stimulating Hormone and are given by daily injection to increase the number of follicles so more eggs may be obtained to develop more embryos.
hCG/Pregnyl or Ovidrel
hCG is the injection used to ripen the egg and detach it from the wall of the follicle.

Hysteroscopy
A procedure where a telescope-like instrument (a hysteroscope) is used to examine the inside of the uterus.

ICSI
Intra-Cytoplasmic Sperm Injection. A treatment option for some couples which involves the injection of a single sperm into the egg.

Implantation
The time at which the fertilised egg embeds in the lining of the uterus.

Intra uterine device
This is a form of contraceptive device which is inserted into the uterus to prevent pregnancy.

IUI
This stands for Intra Uterine Insemination.

IVF
In Vitro Fertilisation. The fertilisation takes place literally in glass outside the body.

LH
Luteinising Hormone is produced by the pituitary gland in women and helps stimulate ovulation.

Lucrin/Synarel
A synthetic hormone which initially stimulates and then suppresses the release of gonadotrophins from the pituitary gland. Its main advantage lies in preventing ovulation occurring before we expect it.

Luteal phase
The second part of a woman’s monthly cycle. The first part ends with ovulation. The luteal phase prepares the uterus for implantation. In the natural cycle, it lasts for 11 - 17 days with an average of 14 days. It ends with menstruation.
**OHSS (Ovarian Hyperstimulation Syndrome)**
A condition that occurs in women when they have used the medication needed for an IVF cycle. The ovaries become swollen resulting in pain and swelling of the abdomen.

**PESA (Percutaneous Epididymal Sperm Aspiration)**
The collection of sperm from the epididymus by fine needle.

**Oligomenorrhoea**
This means infrequent menstruation.

**Oocyte**
The egg.

**OPU**
Oocyte pick up, ie. egg retrieval.

**Ovarian stimulation**
The drug treatment that is prescribed to develop an optimal number of follicles on your ovary.

**Pituitary hormones**
The pituitary gland is situated at the base of the brain and part of its role is to produce hormones necessary for a follicle to develop and ovulation to occur.

**Polyps**
A general term used to describe a mushroom shaped mass of tissue. Polyps in the uterus are benign, but may interfere with implantation or growth of the fetus.

**Trigger injection**
This is the hCG (Ovidrel/Pregnyl) injection that initiates ovulation.

**Vas deferens**
The tubes in the male that carry sperm from the testes.
Assisted fertility involves a team of highly skilled doctors, scientists and nurses using a wide range of high technology equipment, all of which is expensive to provide. Fortunately, in Australia Medicare helps pay for a large component of fertility treatment. Your first treatment cycle for each calendar year will always cost you more because of the capped rebate set by Medicare. Reproductive Medicine has no control over this.

The approach we take at Reproductive Medicine is to only charge you for the services you receive, rather than an all-inclusive fee that includes items that may not be required.

Our policy is to:
- Fully explain our costs before treatment commences
- Inform you of costs for your proposed treatment program
- Provide advice on obtaining your full Medicare rebate, and Medicare Safety Net entitlements

Your egg collection, surgical sperm collection (if required) and anaesthetic procedures require a visit to the day surgery affiliated with your clinic of choice, please speak to the administration team to learn more about the day surgery you will be attending and their costs.

Additional medications, not included in the overall fee and not covered by the Pharmaceutical Benefits Scheme (PBS), are sometimes required. In such instances, the pharmacy will give you an itemised receipt to take to your private health fund.

Should your treatment cycle be cancelled, a partial refund or credit for future attempts may be made. The amount refunded or credited will depend on what stage of your program the cycle was cancelled. Where egg collection has occurred and eggs and sperm put together, given the above billing procedures, if the embryo transfer is not performed there is no additional refund.

On completion of your treatment cycle you will have an account provided to submit to Medicare. Please note that Medicare will not pay any form of rebate unless you have a current referral from your doctor.

More detailed information about your specific costs and the payment process will be provided on the day of your Registration Visit. Assistance regarding payment and costs is available any time from our reception staff. Our current fee schedule is available from our staff.

If you have had embryos frozen you will receive an invoice after the event and at six monthly intervals until all embryos have been thawed.
Medicare

Please check that your bank details are registered with Medicare. This will ensure that you will get your rebates through as quick as possible.

Medicare rebates apply to most Reproductive Medicine services but the fees can be confusing. It is important to note that even though each person has different circumstances, the Extended Medicare Safety Net can significantly reduce the out of pocket costs. Depending on the type of treatment and whether the threshold has been reached, Medicare has put a maximum limit on benefits that will be paid for IVF related services. This is called the Extended Medicare Safety Net Benefit Cap.