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Fertility in focus



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2022

Welcome to Repromed, 'Fertility in focus', a half-yearly newsletter designed to keep you up to date with the latest science, technology and specialised services on offer at Repromed, as well as provide you with quality information on fertility treatment within Australia. I know you will find this issue informative as it contains what we believe to be the best medical advice at this time in relation to fertility treatment in Australia that will have a direct and positive impact for your patients.



By Professor
Kelton Tremellen

A rise in demand for Assisted Reproductive Technology.

It has been 12 months since our last newsletter and like everywhere else, these past months we have been focussed on overcoming the seemingly endless difficulties this pandemic has placed in our way, to ensure we continue to provide high-quality patient care in the most safest of settings.

Happily, however the pandemic seems to be waning and there is a general sense of hope within our community that 2022 will be more 'normal' than we have experienced of late.

One interesting statistic to come from the COVID-19 pandemic is the fact that demand for fertility services remained strong, even increasing from pre-pandemic levels. IVF cycles within South Australia, and the rest of the country have increased by 21% over the last 12 months. This increase in activity, combined with improving success rates (NPESU data) has resulted in a steep increase in the number of babies born from IVF.



Presently 1 in 20 children born in Australia were conceived with the assistance of IVF, an amazing figure when considering that translates to 1 child in every school classroom was a result of Assisted Reproductive Technology.

This rise in IVF cycles likely has many contributing factors. Firstly, the average age of mothers is now 31.6 years (within the Australian community), with the highest fertility rate being in the age group 30-34 years (ABS 2021 figures). The continued trend of delaying childbirth of course does increase the risk of infertility and therefore it is not surprising that we are seeing an increase in IVF activity.

Recent data from the ABS reports that the fertility rate (births per 1,000 people) has now dropped to its lowest rates since records commenced, with the fertility rate now being half of what it was in the post-WW2 baby boom (ABS data). As a result, the current fertility rate sits at 1.58 babies per woman.



In South Australia, that trend has resulted in a 4.9% decline in births last year, a total of 952 children.

What is surprising and difficult to explain is why fertility rates in the general population are falling, yet there is increased demand for IVF treatment. Suggested reasons include; improving IVF success rates, less social stigma associated with infertility and its treatment, and possibly patients bringing forward plans to become parents given opportunities for travel have been limited as a result of the pandemic.

I will endeavour to keep a watchful eye on this trend and update you on any future findings which may help to explain this situation. In the meantime, I hope you take a moment to read this newsletter which features articles by Dr Tristan Hardy on Pre-conception Carrier Screening - an at home test that screens for 410 genetic conditions and is available for anyone considering pregnancy, not just those on the IVF pathway.

Dr Ray Yoong discusses the impact that Endometriosis has on fertility - a timely message as approximately 1 in 10 women will suffer from Endometriosis at some point in their life. And Dr Koch looks at how a Fertility Health Check can help identify the 1 in 6 couples who may be experiencing infertility.

I would like to wish you and your patients all the best for 2022 and hope that life returns to normal as soon as possible.

Kind Regards

Professor Kelton Tremellen
MB BS (Hons) PhD FRANZCOG CREI
Medical Director (SA and NT)



By Dr Ray Yoong

Endo- metriosis and fertility.

Endometriosis is a disease that will affect 10% of women at some point in their life¹.

The cause of Endometriosis is still not fully known although awareness for the disease is greater than ever. Genetics is known to play a part with studies showing that specific genes inherited from parents, will increase the chance of a patient having the disease by 8 fold.

As symptoms of Endometriosis can be many and varied, lengthy delays in diagnosis are common - often averaging around 8 years but sometimes up to 10 years.

About a third of women with Endometriosis discover they have the disease because they have not been able to fall pregnant (approximately 40% of infertile couples will have the disease) or because Endometriosis is found during an operation for another reason.

What exactly is Endometriosis?

Endometriosis is when tissue similar to the normal uterine lining is found growing and invading areas where it should not. Endometriosis most often affects the reproductive organs however it is frequently found in the bowel and bladder and has also been found in muscle, joints, the lungs and the brain.

Currently the only way to accurately diagnose Endometriosis is through tissue sampling collected via laparoscopic surgery. Endometriosis within the ovaries can be diagnosed through an ultrasound.

Treating Endometriosis is challenging as what may work for some patients may not be as effective for others. If your patients are considering surgical treatment for their Endometriosis it is important to ensure their surgeon is an experienced Endometriosis practitioner.



Common symptoms of Endometriosis.

Pain	<ul style="list-style-type: none"> • Pain immediately before and during a period • Pain during or after sex • Abdominal, back and/or pelvic pain • Pain on going to the toilet, passing urine, opening bowels • Ovulation pain, including pain in the thigh or leg (this can also happen normally in some women)
Bleeding	<ul style="list-style-type: none"> • Heavy bleeding, with or without clots • Irregular bleeding, with or without a regular cycle • Bleeding longer than normal • Bleeding before a period is due
Bladder and bowel problems	<ul style="list-style-type: none"> • Bleeding from the bladder or bowel • Change in pattern of bowel habit, such as constipation, diarrhoea • The need to urinate more frequently or some other change from the normal habit
Bloating	<ul style="list-style-type: none"> • Increase abdominal bloating, with or without pain at the time of the period
Mood changes	<ul style="list-style-type: none"> • Anxiety and depression due to ongoing pain
Reduced quality of life	<ul style="list-style-type: none"> • Taking days off work, study or school because of an inability to function normally
Vagina	<ul style="list-style-type: none"> • Pelvic floor muscle spasm or tightening occurs because of fear of pain previously experienced with intercourse or tampon use

Common myths surrounding Endometriosis.

- 1) Endometriosis does not occur in teenage girls. Yes it does! Teenage girls can suffer severe symptoms of Endometriosis.
- 2) Endometriosis will be cured by pregnancy. Pregnancy only suppresses the symptoms; it will not cure the disease. Symptoms usually reoccur 12 months after giving birth.
- 3) Patients will be cured after a single treatment. Surgery is certainly effective but even with optimal treatment, Endometriosis can reoccur in 50% of cases.
- 4) Patients with Endometriosis will require a hysterectomy. While Endometriosis does grow outside of the uterus, only in very rare cases will the uterus need removing.

How does Endometriosis affect fertility?

Endometriosis can influence fertility in several ways: distorted anatomy of the pelvis, adhesions, scarred fallopian tubes, inflammation of the pelvic structures, altered immune system functioning, changes in the hormonal environment of the eggs and impair the implantation of a pregnancy. Unfortunately, some women with Endometriosis can have recurring ovarian cysts. If cysts are removed over and over, this can cause a loss of eggs from the ovaries and can make it harder to fall pregnant.

While Endometriosis can, and often does, prevent pregnancy, by treating the Endometriosis itself, patients find that their infertility symptoms can improve.

(1) Endometriosis Australia

Repromed's at-home genetic carrier screening test screens patients for up to 410 conditions.



By Dr Tristan Hardy,
Medical Director Genetics



Repromed genetic carrier screening test.

Genetic carrier screening is now more accessible for your patients through Repromed and Monash IVF Genetics.

RANZCOG guidelines recommend that genetic carrier screening is offered to all couples who are planning pregnancy or in the early stages of pregnancy¹.

While the availability and access to expanded carrier screening has been increasing over the years, the structures to support clinicians have not met the demand and need of patients and clinicians alike.

Repromed's genetics service has an online resource which allows patients to receive information on genetic screening, order and pay for the test and have Telehealth appointments with our dedicated genetic counselling team, all from the comfort of their home.

The test is available to any interested patient/s and individuals do not need to be an IVF patient or undergoing fertility treatment to order the test.

This test compares favourably to other expanded carrier screening tests available within Australia, as it screens for 410 genetic conditions (including 50 X-linked) making it highly effective in identifying at-risk carrier couples. Using this test, we estimate that 1 in 20 reproductive couples will find that they have an increased chance of having a child with a single gene condition.

Importantly, we are determined to provide a premium test in both service and design that integrates with your patients' fertility journeys both within and outside of Repromed.

Thanks to our network of experienced fertility doctors, genetic counsellors, scientists, obstetricians, gynaecologists, sonographers, sonologists, donor and surrogacy experts and nursing teams, Repromed can offer patients holistic, integrated care from genetic testing to counselling, all the way through to fertility treatment options and prenatal diagnosis if required.



I encourage anyone who is interested and passionate about providing carrier screening for their patients to learn more about our service and to feel free to reach out to me for more information and support for their patients.

How does the Repromed genetic carrier screening work?

Designed to be as simple as possible for patients, there are two ways for patients to access the test, depending on what stage of their fertility journey they are at:

- **Option 1**
DIY test at home (non-pregnant patients)
- **Option 2**
Blood collection at Repromed

The process for patients:

- 1) The patient orders the screening test online via the Monash IVF website (monashivf.com)
- 2) They receive an email from the Monash IVF Genetic Counselling Team with the details of their test and a consent form.
- 3) If they are pregnant, the counselling team calls them to advise that a blood test is preferred, and emails them a pathology form. Otherwise, the at-home genetic carrier screening test is mailed to the patient.

When the kit arrives, they follow the instructions to provide a saliva sample via a cheek swab.
- 4) They mail their sample back using the reply-paid envelope provided or drop it off at an eligible clinic.
- 5) They receive their results and supporting information from the genetic counselling team (usually within 4-5 weeks). Low-risk couples will receive an email with their results. High-risk couples will be invited to book an online appointment to discuss their results in detail.

If you would like to learn more about the Repromed Pre-conception Carrier Screening Test or to book an in service, please email spollock@repromed.com.au

¹ RANZCOG Genomics Advisory Working Group & Women's Health Committee Statement on Genetic Carrier Screening, March 2019

Everyone's fertility journey is different, that is why at Repromed we have a variety of investigations to assist people with understanding their fertility better and to provide answers regarding their health so that they can make informed decisions about their future.



By Dr Juliette Koch

Fertility health.

A Fertility Health Check is a great first step if your patients are considering having a baby, if they have been trying for more than 6 months and have not fallen pregnant, or if they are seeking information about their biological clock.

The Repromed Fertility Health Check includes:

- Anti-Mullerian Hormone (AMH) Blood Test (for the female partner)
- Semen Analysis if appropriate (for the male partner)
- Review appointment with a Repromed clinician

Anti-Mullerian Hormone Test

The Anti-Mullerian Hormone (AMH) Blood Test helps to measure the hormone associated with a woman's ovarian reserve levels - the lower the number of eggs, the lower the level of AMH will be detected.

Women with a diminished ovarian reserve may have an increased risk of miscarriage and reduced IVF success.

This blood test provides a snapshot early on so a decision can be made on when to start trying for a baby and when to access fertility treatment. This test can be done at any time during a normal menstrual cycle.

Anti-Mullerian Hormone has also shown to be a good marker for Polycystic Ovarian Syndrome (PCOS).

Semen Analysis Test

Smoking, alcohol, certain chemicals and a variety of other factors can affect the health of sperm.

A Semen Analysis is the single most important piece of information needed to assess male fertility. It measures the amount and quality of a man's semen and sperm - assessing characteristics such as sperm movement.

Repromed's fully NATA (National Association of Testing Authorities, Australia) accredited Andrology Laboratory is one of the main providers of semen testing for fertility assessment, post vasectomy checks and cryopreservation of sperm (eg. prior to cancer treatment) in South Australia. Samples are analysed within an hour of collection to get the most accurate results.

A Repromed Fertility Assessment is for patients who are a little further along in their journey to having a family and is recommended for people who have been trying to conceive naturally for more than 12 months if they are under 35 or have been trying to conceive for longer than 6 months if they are over 35.

A Fertility Assessment is also recommended for anyone who has already had a miscarriage, or a diagnosis of a fertility issue, such as PCOS.

The Fertility Assessment includes all the same tests as the Fertility Health Check, however it also provides a more comprehensive understanding of a patient's fertility as it includes a Day 2-6 ultrasound performed by one of our highly skilled Sonographers.

The ultrasound is an important inclusion as it informs us of any uterine abnormalities (e.g. fibroids, polyps, cysts) which can only be detected by ultrasound. Repromed sonographers are also trained to look for evidence of deep infiltrating Endometriosis and adenomyosis).



When to refer for further assessment?

If your patients are under the age of 35 and have been trying to fall pregnant for 12 months without any luck, then we strongly suggest it is time to refer to a clinician who specialises in fertility care. If patients are over 35, we suggest waiting only 6 months before referring on.

UNDER 35:
12 MONTHS OF TRYING

OVER 35:
6 MONTHS OF TRYING

Fertility facts

- Approximately 1 in 6 couples can be affected by infertility.
- Infertility is classified as no pregnancy after 12 months of unprotected intercourse.
- The most fertile time of the cycle is just prior to 12-14 days from the end of a menstrual cycle.
- Fertility decreases with age in women - slightly at 30 years, significantly around 37-38 years, and at the age of 40 it is around a quarter of when aged 30.
- Defects in sperm quality are the sole or contributing factor in over half of all cases of infertility.
- At least 1 in 20 Australian men have a significant problem with their sperm quality leading to infertility.
- Lifestyle factors such as smoking, alcohol, diet and weight, reduces fertility and increases miscarriage rates. Smoking can lead to reduced ovarian reserve and DNA damage in sperm.

Resources and next steps.

Would you like any resources for your clinic?

Referral pads? Patient brochures?
An educational session? Please contact
Sue Opie or Steph Pollock.

Sue Opie
M 0411 523 528
E sopie@repromed.com.au

Steph Pollock
M 0419854722
E spollock@repromed.com.au

Free Patient Webinars

Repromed regularly holds free webinars
designed to give hopeful parents-to-be all
of the information they need to start their
family.

Presented by one of our Fertility Doctors,
these sessions provide advice on everyday
things which can increase someone's
chances of falling pregnant. We also cover
causes and treatment of miscarriage and
infertility, and the steps to take if someone
feels it is taking too long.

For details on up and coming webinars or to
register simply visit our website at
repromed.com.au and click on the link to
our "Webinars" tab.

\$0 Out of pocket appointment

We are pleased to provide the first
appointment to your patients in South
Australia at no out of pocket expense.

If referring a couple to Repromed, please
ensure both names appear on the referral
for Medicare rebate purposes.

South Australian referrals can be sent to:

Email: enquiries@repromed.com.au
Phone: (08) 8333 8111
Fax: (08) 8333 8188

Northern Territory referrals can be sent to:

Email: darwin@repromed.com.au
Phone: (08) 8945 4211
Fax: (08) 8945 4255

Services on offer at Repromed

- Fertility Assessments & Investigations
- Cycle Tracking
- Ovulation Induction
- Intra Uterine Insemination (IUI)
- In Vitro Fertilisation (IVF)
- Pre-implantation Genetic Screening /
Diagnosis
- Embryo, Sperm & Egg Freezing
- Embryo, Sperm & Egg Donation
- Surrogacy Assistance
- Fertility Counselling



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- Port Lincoln

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Also Consulting in

- Alice Springs