INFORMATION ON RECOMMENDED SCREENING TESTS

Prior to commencing treatment with Fertility Solutions, you will be required to have certain screening tests performed. Some of these tests are mandatory whilst some are highly recommended. These tests are performed either to minimise the risk of transmission of infection from person to person and mother to baby or to provide your doctor with additional information that can help them when planning your treatment. **Tests such as Hepatitis B and HIV does not provide a 100% guarantee that these viruses/infections are not present in the person being tested.**

Your General Practitioner may be able to request some or all these tests to streamline the fertility screening process for you. Some of the tests require an explanation before and after as to why they are offered along with the implications of an adverse result. Your GP may not feel comfortable in ordering them and request they be ordered by the Fertility Specialist at your first consultation.

YOU WILL NEED TO BOOK A LONGER CONSULTATION WITH YOUR GP IF YOU WANT TO DISCUSS THEM REQUESTING THESE TEST. Some of the tests below can take up to 5 weeks before a result is reported.

TESTING FOR BOTH PARTNERS:

Chromosomes Analysis Blood Test (Mandatory, only needs to be tested **once** in a lifetime, bulk billed, result can take approximately 8 weeks)

- This test evaluates the number and structure of a person's chromosomes to detect abnormalities. It can be used to confirm or diagnose a genetic disorder or disease. Or, the testing may reveal that there is risk of having difficulty falling pregnant or of miscarriage or having a child with a genetic or chromosomal disorder.
- Humans have 46 chromosomes, present as 23 pairs. Twenty-two pairs are found in both sexes and one pair (sex chromosomes) is present as either XY (in males) or XX (in females).
- The incidence of chromosomal abnormalities in individuals having fertility treatment is approximately 2% which compared to 0.6% of women not requiring fertility treatment.

Chlamydia/Gonorrhoea Urine Test (Mandatory, must be repeated every 2 years, bulk billed)

- Chlamydia and gonorrhoea are both communicable infections (sexually transmitted infections) caused by a bacterium.
- They can be contracted through oral, genital, or anal sex.
- In pregnancy, untreated Chlamydia/Gonorrhoea, can cause pregnancy and neonatal complications, i.e.: pelvic inflammatory disease (PID), neonatal conjunctivitis which can lead to blindness if untreated, pneumonia, miscarriage, or stillbirth.

Hepatitis B surface antigen Blood Test (Mandatory, must be repeated every 2 years, bulk billed)

- Hepatitis B virus is an acute and chronic communicable disease that causes major liver disease.
- The virus it is excreted in various body fluids including blood, saliva, vaginal fluid, and breast milk. These fluids may be highly infectious.
- Adults who have hepatitis B may have no symptoms.
- There is a 90% chance of the infection being transferred to baby if they are not treated at birth if the mother already has the infection.
- Hep B Vaccination is safe to receive during pregnancy for mothers.

Hepatitis C antibody Blood Test (Mandatory, must be repeated every 2 years, bulk billed)

- Hepatitis is infection of the liver and can be caused by the hepatitis C virus which is transmitted through blood-to-blood contact.
- If left untreated, it can lead to liver damage, cirrhosis, and liver cancer.
- If the mother is infectious, treatment is not recommended during pregnancy due to potential birth defects.

HIV 1 & 2 Blood Test (Mandatory, must be repeated every 2 years, bulk billed)

- Human immunodeficiency virus (HIV) is a blood-borne infection that is initially asymptomatic but involves gradual compromise of immune function, eventually leading to acquired immunodeficiency syndrome (AIDS).
- It is transmitted via semen, vaginal fluid, blood, and anal mucus. It can also be transmitted to a baby during pregnancy, at birth or through breastfeeding.

Syphilis Blood Test (Mandatory, must be repeated every 2 years, bulk billed)

- Syphilis is a communicable infection caused by a bacterium.
- In pregnancy, it can result in spontaneous miscarriage or stillbirth or result in a baby being born with a congenital syphilis infection.
- Syphilis in pregnancy can be safely treated with antibiotics, which can prevent these complications.
- Untreated syphilis during pregnancy is associated with stillbirth and foetal loss, preterm birth, neonatal death, low birthweight, and congenital syphilis.

CMV Serology Blood Test (Mandatory, must be repeated every 2 years, bulk billed)

- Cytomegalovirus is a member of the herpes virus family transmitted by contact with saliva, urine or genital secretions.
- Most people who acquire the virus after birth experience few or no symptoms.
- Cytomegalovirus remains dormant after primary infection and may become active again particularly during times of compromised immunity, including pregnancy.
- Congenital cytomegalovirus (infection of the baby that is present at birth), is the most frequent infectious cause of newborn disability. Spread of infection from mother to child may occur across the placenta resulting in congenital infection in the baby.
- Effects of CMV infection during pregnancy include late miscarriage, stillbirth and growth restriction.
- Approximately 10% of babies infected with cytomegalovirus in utero will have symptoms at birth and are at high risk of developing hearing loss (35%) or intellectual deficits (up to 60%), other neurological disabilities (epilepsy and cerebral palsy) or death (4%).

HTLV type I & II Serology Blood Test (Mandatory, must be repeated every 2 years, bulk billed)

- The Human T-cell lymphotropic viruses (HTLV) are part of the same group of virus's as human immunodeficiency viruses (HIV).
- HTLV-1 is transmitted from mother to child mainly through breast feeding. About 20-50% of the babies born to infected mothers will become carriers. Other ways the disease is passed on are by blood transfusion (if the blood is not screened for HTLV-1), sexual intercourse and by sharing contaminated needles.

ADDITIONAL TESTING FOR MALE UNDERGOING TREATMENT:

Semen Analysis (Mandatory and needs to be repeated every 12 months)

- It is necessary for the male partner to have a Semen Analysis with Fertility Solutions. If you have had a semen analysis at another accredited Fertility Clinic within the previous 12 months and copies of the results can be obtained, you may not need to have this test repeated. Anti-sperm antibody testing should be tested in conjunction with a semen analysis.
  If you have not had this test within the past 12 months, then it must be done before any treatment commences.

ADDITIONAL TESTING FOR FEMALE UNDERGOING TREATMENT:

Anti-Mullerian Hormone Blood Test (AMH)

(Mandatory - Recommend repeating every 12 months, NOT bulk billed)

- Also often referred to as the 'egg timer' test and can be done at any time of the month.

- AMH is a hormone produced by the ovaries by the developing follicles that contain eggs. The level of AMH in a woman's blood is generally a good indicator of her ovarian reserve. Women are born with their lifetime supply of eggs, and these gradually decrease in both quality and quantity with age.
- The **Oral Contraceptive Pill (OCP) and supplements containing Biotin** (Vitamin B7, in most pre-conception multi-vitamins) can affect the accuracy of this test. It is recommended that you cease the OCP a full month prior to having this test and cease your supplements 3 days prior to having the test.

Baseline Female Hormones and Progesterone post ovulation Blood Tests (Mandatory)

- This blood test will provide your doctor with a baseline about how your body and ovaries may be functioning by assessing your Oestradiol (E2), Luteinising Hormone (LH), Progesterone (P4) and Follicle Stimulating Hormone (FSH) levels between day 2 and 4 of your period. In addition, a check on Progesterone level approximately 1 week prior to your period commencing, D21 for 28 day cycles, confirms if you are ovulating. These tests are used in conjunction with the AMH and Antral Follicle Count so your treatment can be individually tailored.

Rubella Blood Test (Mandatory, must be repeated every 2 years)

- Rubella is sometimes called German measles, but it is not the same disease as measles.
- Rubella is usually a mild illness, with a fever, rash, and swollen lymph glands. However, if contracted by pregnant women during the first 10 weeks of pregnancy, the disease can cause life-long problems for babies where the baby can be born with deafness, blindness, heart problems, brain damage, growth problems, swelling in their brain, liver or lungs. About 9 in every 10 babies whose mothers get rubella in the first 10 weeks of pregnancy will have one or more of these problems.
- Testing for the Rubella virus helps determine if the patient has immunity. If not immune a booster injection is recommended. If after the first booster immunity is still not achieved another booster may be recommended. There should be at least 28 days following the booster before pregnancy occurs.

Vitamin D Blood test (Mandatory)

- Vitamin D deficiency is related to issues with egg quality, implantation and immune system function. Optimised Vitamin D levels in pregnancy help reduce the risk of gestational diabetes and pre-eclampsia along with overall improved health outcomes for mothers and babies.

Blood Group & Antibodies (Mandatory, only needs to be tested **once** prior to treatment)

- This blood test is to determine the blood group and antibody status of a woman and identify any risk of issues that may affect the pregnancy and developing foetus.

Baseline Pelvic scan (Mandatory, only repeated every 12 months)

- This procedure assesses the female pelvis, uterus and ovaries for any obvious conditions that may impact upon fertility. The scan also reports Uterine Position, Antral Follicle Count (potential ovarian egg reserve), and other information that is used to assist the nurse/doctor when performing an embryo transfer. The preference is that the scan is a detailed 3D pelvic ultrasound performed by a qualified sonographer. **The scan should be a 3D uterine and endometrial cavity assessment.** This has been shown to be the most effective in detecting uterine problems when compared to 2D (black and white) USS, sonohysterogram or HSG and is even considered a good alternative to hysteroscopy and laparoscopy (gold standard) for diagnosis of uterine anomalies (things outside the normal).

  Pelvic USS should be repeated every 12 months as the incidence of polyps and fibroids increase as women age, especially from late 30's onwards.

General health checks such as investigations for thyroid function, iron, diabetes, coeliac disease and other autoimmune conditions as deemed necessary by your GP or specialist are also highly recommended.

OPTIONAL Genetic Carrier Screen testing: As recommended by The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) for females planning a pregnancy.
The below Genetic Carrier Screen Panel if done through **QML** has an out-of-pocket cost of approx. $380 (includes all 3 tests). Partner testing is free if the female tested is a carrier for Cystic Fibrosis or SMA. If either partner has a family history of these conditions it is highly recommended that both partners have the testing and genetic counselling prior to treatment commencing.

Cystic Fibrosis Carrier Screen Blood Test (Only tested once in a lifetime) Out of pocket cost.

- Cystic Fibrosis (CF) is an inherited, genetic condition that primarily affects the lungs and digestive system due to a malfunction in the organs that are responsible for producing saliva, sweat, tears and mucus. There is currently no cure.
- People with CF develop an abnormal amount of excessively thick and sticky mucus within the lungs, airways, and the digestive system. This causes impairment of the digestive functions of the pancreas and traps bacteria in the lungs resulting in recurrent infections, leading to irreversible damage. Lung failure is the major cause of death for someone with CF.
- In the general population, 1 in 25 persons is a carrier of an abnormal cystic fibrosis gene. Carriers are otherwise completely healthy. The chance of you both being a carrier is 1 in 625. If both partners are carriers, the risk of a baby being born with cystic fibrosis is 1 in 4 (25%). There will also be a 1 in 4 (25%) chance the child will not have CF and a 2 in 4 (50%) chance a child will be a carrier of CF.
- Where an infant receives the CF gene from just one parent, he or she will not be born with CF, but will be a symptomless carrier of the CF gene like his or her parents.

Spinal Muscular Atrophy (SMA) Carrier Screen Blood Test (Only tested once in a lifetime) Out of pocket cost

- Spinal muscular atrophy (SMA) is an inherited, genetic condition that results in progressive muscle weakness and paralysis. SMA is also known as the childhood version of Motor Neurone disease.
- 1 in 35 people in Australia (mostly unknowingly) carry the faulty SMA gene. Being a carrier does not mean you are affected by the disease.
- A person is born with SMA when BOTH parents are carriers of this gene. There is a 1 in 4 chance of this couple having babies with SMA.
- One in 10,000 live births in Australia are affected by SMA and the condition affects both males and females.
- There are three types of SMA. The most severe type is usually diagnosed within the first few months of life. Affected children have severe muscle weakness and typically do not survive past the age of 2. The other two types of SMA, which are less common involve a lesser degree of muscle weakness. Most affected individuals need to use wheelchairs or need assistance with walking. Life expectancy for the less severe types ranges from the teenage years to adulthood. Those with the mildest form of SMA are expected to have a normal lifespan.
- 60-70% of all SMA patients have the most severe form (Type 1).

Fragile X Carrier Screen Blood Test (Only tested once in a lifetime) Out of pocket cost.

- Fragile X is an inherited, genetic condition (X linked dominant).
- It is estimated that about 90,000 people in Australia are impacted by Fragile X in some way – as carriers of Fragile X, or with Fragile X syndrome.
- Both males and females can be carriers of the Fragile X gene.
- About 1 in 250 (0.4%) women and 1 in 800 (0.1%) men are Fragile X carriers.
- Fragile X is caused by a change in a single gene, the FMR-1 gene. This gene helps create a protein that is needed for healthy brain development. People with Fragile X syndrome have intellectual disability, behavioural and learning challenges.
- Fragile X is the most common inherited cause of intellectual disability, and the most commonly known genetic cause of autism.

For more information on screening tests contact your Specialist or a nurse at Fertility Solutions.