

Virtus Diagnostics offers a complete range of general pathology services as well as specialist fertility and genetic testing.

Virtus Diagnostics conducts over a million tests each year across the following disciplines: general pathology, fertility pathology and advanced genetic testing.

We continually innovate and expand this range and with over 200 scientists, many that are internationally renowned in their field, you can be assured you are accessing world class diagnostics services.

Virtus Diagnostics is committed to supporting patients' health throughout their lifetime, and in particular, during their reproductive life. For women this includes general gynaecology and for both men and women it includes general health, fertility planning and conception, through to infertility treatment.

Our service offers:

- Specialists in clinical genetics
- A comprehensive range of tests
- Fast turnaround of results
- Highly skilled and experienced scientists, with access to the latest technology
- Convenient collection centres, and
- Personalised service

Virtus Diagnostics Collection Centres

The network of Virtus Diagnostics collection centres are across NSW, QLD, VIC & TAS. Please refer to virtusdiagnostics.com.au for the complete list of our collection centres.

Virtus Diagnostics General enquiries
1800 837 284

Virtus Diagnostics Accounts enquiries
1800 090 325

virtusdiagnostics.com.au

Genetic Fertility Panel



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Genes affect fertility

Approximately one in six Australian couples will have trouble conceiving. Fertility issues leading to pregnancy delay, can be caused by male or female issues or a combination of both.

Often these conditions can be identified and treatment plans developed. However, approximately 10-20% of couples with fertility issues will have what is called idiopathic or unexplained infertility.

The creation of life is complex, and sadly, science and medicine do not always provide us with definitive answers.

The Virtus Diagnostics Genetic Fertility Panel has been designed to investigate genes, in both males and females, which are specifically associated with difficulties in conceiving or maintaining a pregnancy.

Understanding why genes matter

When we think of genes it is often in the context of inherited traits or characteristics (e.g. why you may look like your mother), or perhaps inherited diseases (e.g. the BRCA gene that has been linked to breast cancer). What you may not be so familiar with is the relationship that genes have with proteins, and the significance that this has to every single function in your body, and in turn to your reproductive health.

Genes are like a blue print that your body needs to function correctly. This is because genes make proteins and proteins perform critical and specific tasks in the body – everything from digesting your food to transporting your oxygen. Genes are the working plans for your body, similar to what a builder uses when he constructs a house.

Every gene is made up of a specific sequence of DNA. This sequence is the information necessary to create specific proteins. We all have some level of variant in our genes and much of this is normal. Some variants create a significant change to the DNA sequence and the protein it produces, resulting in decreased fertility.

The genes that we test for in The Genetic Fertility Panel are all related to you and your partner's ability to get pregnant, or successfully carry a child to full term.

What does the Genetic Fertility Panel test for?

Females and males

Cystic Fibrosis

Cystic Fibrosis is an inherited disorder which affects all organs of the body. The major impact is on the lungs and digestive system. Thick mucus builds up, trapping bacteria leading to recurrent infections which damage the lungs. In the gut, thick mucus makes digestion of food difficult.

A person with CF requires medical treatment from birth and throughout their entire life. Daily physiotherapy is needed for their lungs and frequent medical treatments such as antibiotics are required to treat bacterial infections.

Despite modern treatment there is currently no cure for CF sufferers who experience a reduced life expectancy, often needing extreme treatments such as heart and lung transplant.

Male CF carriers may have an alteration in the gene that is associated with infertility; carrier rates for CF are higher in infertile couples.

STAG3

This gene is important in allowing chromosomes to separate correctly during the formation of the egg and sperm. Abnormalities in this gene have also been identified in some female patients with an ovarian reserve that is lower than expected for their age.

Females

MTHFR

This gene is important in processing of folic acid. Folic acid plays a major role in the prevention of neural tube defects. One specific variant causes

hyperhomocystinaemia - elevated levels of homocysteine. This condition is typically managed with vitamin B6, vitamin B9 and vitamin B12 supplementation.

Prothrombin and Factor V Leiden

These genes are involved in the clotting pathway in the blood and variants in each of these genes can be associated with recurrent pregnancy loss.

FSH receptor

Patients can respond differently to ovarian stimulation with Follicle Stimulating Hormone (FSH) in IVF cycles and there is a variant in this gene that can predict an adverse response which is particularly helpful in preparing for fertility treatment.

Males

AZF

This is a group of genes that control sperm production. If one or more of these genes are absent, sperm production may be very low or absent again guiding most appropriate fertility treatment.

Haemochromatosis

Haemochromatosis is a very common genetic disorder (1/200 affected individuals in the population) involving excess iron storage in the body with clinical symptoms appearing only between 30-50 years of age. In males, affected individuals can have poor sperm motility and/or altered hormone levels.

Who should be tested?

Anyone who is experiencing pregnancy delay, or has had more than one miscarriage may benefit from this test. You should discuss this test further with your Fertility Specialist.

The Genetic Fertility Panel is most beneficial when both partners are tested.

How do I get tested?

The Genetic Fertility Panel can be requested by your IVF Specialist and is performed on a sample of your blood.

What if I test positive?

Your Fertility Specialist will discuss all of your results with both you and your partner. In most instances the information will then be used to determine an appropriate treatment plan to help you on your path to pregnancy.

How much does it cost?

The current cost of this test can be found on our website at virtusdiagnostics.com.au