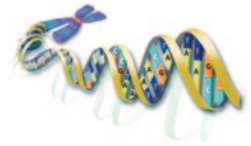


Genetic Diagnostic Testing



Our individuality is based on our genetic variety. The complete genetic information possessed by an organism is referred to as the genome. In humans, up to 99.9% of the genome is identical. The remaining fraction of 0.1% is responsible for the inherited variety within mankind. The identification of genetic variants (polymorphisms) in the human genome has become increasingly clinically significant in the past decade.

Polymorphisms do not tell us whether or not we are going to develop a particular disease, but they do indicate the presence of risk or preventive factors. We do not inherit a disease state as such, but rather we inherit a set of susceptibility factors to environmental influences that modify the risk of developing a disease.

These factors include cigarette smoke and air pollution, excessive alcohol consumption, poor diet, sun exposure, bacterial infection, chronic nutrient deficiencies, hormone imbalances, lifestyle habits and toxic exposure. The vast majority of genetic polymorphisms only have the potential to cause health problems if we are exposed to the wrong “mix” of harmful agents over time.

Preventive genetic diagnostic testing focuses on individual risk profiles, in combination with traditional risk factors and the familial medical history. This helps to explain why individuals are affected differently by the same environmental factors. The knowledge of genetic factors makes preventive medicine easier in that for example, if the polymorphism result indicates an increased risk for developing prostate cancer, the patient needs regular screening and a nutritional optimisation plan.

This inherited genetic aspect of the individual risk for certain diseases can be refined by selecting the genetic diagnostic test most appropriate for your patients. And most importantly, it helps the practitioner to determine a suitable treatment plan tailored to the patient's individual genetic needs.

The following Genetic Tests are available:

Tests for Basic Prevention

Andrology

• AndroSensor 40plus

Evaluation of the genetic associated risk of prostate cancer, thrombosis, osteoporosis, chronic inflammation and metabolic imbalance leading to poor detoxification

Gynaecology

• FemSensor 40plus

Evaluation of long-term exposure to oestrogens, bone metabolism (osteoporosis), risk of thrombosis and cardiovascular problems when taking HRT, and possible breast cancer risk due to the individual genetic profile

Obstetrics

• FemSensor PREGNANCY

Evaluation of the risk of complications in pregnancy such as preeclampsia, thrombosis and recurrent miscarriage

Pharmacology

• PharmacoSensor

Identification of genetic variations which influence metabolism, efficiency and adverse effects of medication

Cardiology

• CardioSensor PREMIUM

Extended risk evaluation of arteriosclerosis, obesity, disordered lipid metabolism, high blood pressure, coronary artery disease (CAD) and stroke

Nutrigenetics

• NutritionSensor

Identification of genetic variations which influence the processing of nutrients in the human body. The test results enable the determination of an individualised nutrition scheme to meet patients' unique nutritional requirements

Tests for Premium Prevention

• PREMIUM female

Genetic risk evaluation with regard to: long term exposure to oestrogens, thrombosis while taking HRT, breast cancer, arteriosclerosis, hypertension, stroke and coronary artery disease (CAD). In addition, this test provides information on detoxification and identification of genetic variations which influence metabolism, efficiency and adverse effects of medication

• PREMIUM male

Genetic risk evaluation with regard to: prostate cancer, thrombosis, osteoporosis, detoxification and chronic inflammation, arteriosclerosis, hypertension, stroke and coronary artery disease (CAD). In addition, this test enables identification of genetic variations which influence metabolism, efficiency and adverse effects of medication

Test Kit

Once the practitioner has given the patient their request form, the patient can order their test kit online, www.functionalpathology.com.au or by calling Healthscope Functional Pathology customer service on 1300 55 44 80 between the hours of 8.30am and 5.30pm AEST. The test kit contains full instructions.

Specimen Requirements

- *Only a few samples of cells from the buccal mucosa are required to make a genetic analysis. These can be painlessly collected by rubbing the inside of the cheek with a cotton swab. The test kit provided contains everything required to complete this test.*

Patient Preparation

- *No eating or drinking 60 minutes prior to specimen collection*

Turnaround Time

The standard turnaround time for this test is 20 working days from the date the patient's specimen/s are received at our laboratory. Please note that these tests are performed by Genosense, Austria, for whom Healthscope Functional Pathology are the exclusive Australian distributor.

Test Results

Patient results will be delivered via mail, unless requested otherwise. However, we can also issue results via:

- Fax
- Electronic Download
- Web Based Results

Technical Support

All Healthscope Functional Pathology tests are accompanied by an Interpretive Guide to assist practitioners in their clinical understanding and patient management for each result. Healthscope Functional Pathology also has experienced full time Technical Advisors available for practitioners to discuss appropriate test selection, interpretation of test results, individual cases and other technical matters.

Please call 1300 55 44 80 between the hours of 8.30am and 5.30pm AEST or email infofp@healthscope.com.au

Companion Tests

- **Functional Liver Detoxification Profile (FLDP)**
- **Adrenal Hormone Profile**
- **Baseline Hormone Profile (Male/Female)**
- **2 & 16 Urinary Oestrogen Metabolites**

The results of Genetic Diagnostic Testing (GDT) may be further supported by additional Healthscope Functional Pathology tests. For example, a polymorphism within the cytochrome P450 1B1 (CYP1B1) gene has been shown to increase CYP1B1 activity and may be involved in the development of certain cancers such as breast and prostate cancers. It is therefore recommended to conduct the 2 & 16 Urinary Oestrogen Metabolites test which monitors oestrogen metabolism and will highlight whether the patient is currently oestrogen dominant.

The Functional Liver Detoxification Profile (FLDP) is also recommended when a polymorphism within the cytochrome P450 1B1 (CYP1B1) gene is detected on GDT, particularly if there is also a polymorphism within the glutathione s-transferase (GSTP1) gene. A polymorphism within this gene has been shown to result in reduced enzyme activity, and to modulate the predisposition to certain cancers, especially lung cancer within risk groups such as smokers, or non-smokers who are exposed to environmental tobacco smoke. The FLDP provides important information regarding the activity of these enzymes and the patient's current detoxification capacity.

The Baseline Hormone Profile (Male and Female) may provide additional important information on hormonal imbalance, while the Adrenal Hormone Profile is also recommended as prolonged stress may also contribute to hormonal imbalance. The Adrenal Hormone Profile measures cortisol and DHEA-S over a 24 hour period.