Nuffield Health

StoreGene

Cardiovascular Genetic Profiling

StoreGene is a service that provides genetic risk profiling for people at risk of coronary heart disease (CHD)

StoreGene Initiative

StoreGene genetic profiling protects against CHD through early detection and prevention by accurately determining and securely storing genetic information across individual genomes and mapping this to disease and risk factors. Clients benefit from enhanced interventions and improvement in their quality of life.

The StoreGene Initiative informs an individual of their personal risk of future early heart disease and supports that individual in reducing this risk through therapeutic intervention.

The StoreGene diagnostic process involves a simple non-invasive saliva collection kit. With a UCL team of leading medical experts, StoreGene's management system provides a detailed analysis of an individual's 10 year CHD risk. Results and the treatment plan are automatically provided through the StoreGene programme.

Genes

Genes are specific pieces of information that instruct our bodies how to grow, function, and develop. These genes, which are contained on our 23 pairs of chromosomes, make up our genetic blueprint. Each gene codes for a specific set of instructions, and a gene's function is determined by its unique DNA code. DNA consists of four basic building blocks called bases that are linked in a specific order. When a change occurs in the ordering or number of bases, a gene may not function properly. A gene change which can cause a disease is called a mutation.

Heart Disease

It is estimated around 4 million people in the UK may be unaware that they are at high risk of CHD. Traditional diagnostic risk assessment techniques (e.g. Framingham risk score or other score based risk algorithms) are the primary means of addressing cardiovascular mortality. Genetic testing in conjunction with classical risk factors is proven to improve the clinical utility for CHD risk assessment.

The StoreGene test provides clients and clinicians with additional information, allowing them to make better informed decisions concerning prevention and treatment. We can't alter our genetic makeup, however the use of additional genetic information allows for improved targeted treatment. If a client undergoes our genetic profiling and results in him/her having a high genetic risk to developing CHD, clinicians can apply more targeted measures to lower the client's conventional risk factors (weight, cholesterol, diet, exercise etc.). This will help lower their overall risk of heart disease. It also provides improved targeting for statin treatment as clinicians are able to classify high risk (who are likely to need statin treatment) clients more precisely.

The role of genetics in disease detection and prevention is growing rapidly and more importance is being put on CHD prevention at an early age. Prevention starts with assessing a individual's risk factors and working to keep their overall risk low. In addition to early detection and prevention, treatment is becoming more personalised and tailored, all of which the StoreGene Initiative offers.

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StoreGene Report

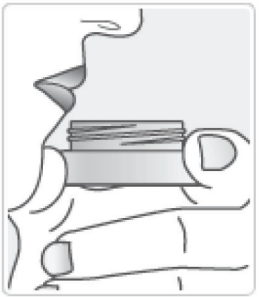
The report shows the probability of a CHD event in the next ten years. The StoreGene system presents risk score information in an easy to understand format – the example report to the left includes a patient's overall 10 year risk to CHD (genetic in red and conventional risk factors in green) compared to an average individual's risk in the same age group.

The system automatically generates a personalised report along with a therapeutic plan. The report and therapeutic plan is printed for the clinician to give the client suggestions on how to lower their risk. This plan includes a histogram at the end to show the patient's lowered risk if they follow the guidance.

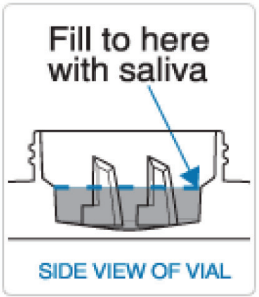
The StoreGene programme diagnoses, informs and treats individuals in tandem with medical professionals, providing them with additional information to make better informed decisions about heart disease risk and treatment under one system.

Saliva Collection Kit

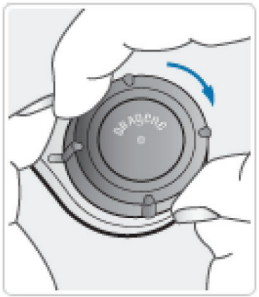
DNA is extracted from a collected saliva sample using the saliva collection kit. An individual will receive one during their consultation with a physician, they simply deposit saliva into the main chamber and fasten the lid on.



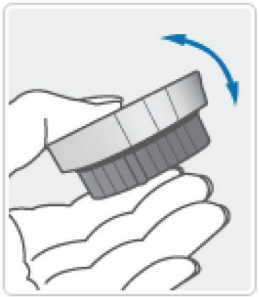
1 Spit saliva into the empty container.



2 Spit until the amount of liquid saliva (not bubbles) reaches the level shown above.



3 On a flat surface, cap the container with the lid.



4 Tighten firmly and mix gently.