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LIPIDgen

Examples of our Genetic Profiles:

FEMgen: Sporadic breast cancer
OSTEOgen: Osteoporosis
THROMBOgen: Thrombosis
PROSTATEgen: Prostate cancer
DETOXgen: Detoxification capacities
DETOXgen heavy metals: Detoxification of heavy metals
OXigen: Oxidative stress
DENTYgen: Periodontitis
NEUROgen: Neurodegenerative diseases
CARDIOgen: Cardiovascular diseases

MACULAgen: Age-Related Macular Degeneration
LIPIDgen: Lipid metabolism disorders
DIABETOgen: Diabetes type II
COLOgen: Sporadic colon carcinoma
ALOPECIAgen: Androgenetic alopecia
EMOgen: Emotional instability
AUTISMgen: Autism
SKINgen: Skin health
WEIGHTgen: Weight control
WELL-BEING: Anti-aging
NICOTINEgen: Nicotine addiction

Personalized Prevention of Atherosclerosis



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LABORATOIRES RÉUNIS

4P GENOMICS
DISCOVER YOURSELF

What are lipid metabolism disorders?

Disorders in the lipid metabolism lead to several pathologies such as hyperlipidemia and are largely involved in atherosclerosis. Blood levels of cholesterol (high LDL levels and low HDL levels) as well as small sized LDL particles are two of the major causes for the development of atherosclerosis.

What is atherosclerosis?

Atherosclerosis is a condition in which the intima of medium and large arteries thickens as the result of a build-up of fatty materials, complex carbohydrates, blood products, fibrous tissue and calcareous deposits, all this accompanied by a modification of the media.

Since several years and especially in industrialized countries, the occurrence of ischaemic heart diseases due to the consequences of atherosclerosis remains among the main causes of death. Cerebrovascular accidents, also called stroke, concern as well a big number of people (Fig 1).

Fig 1: Major causes of death in 2004 (Source: ONS)

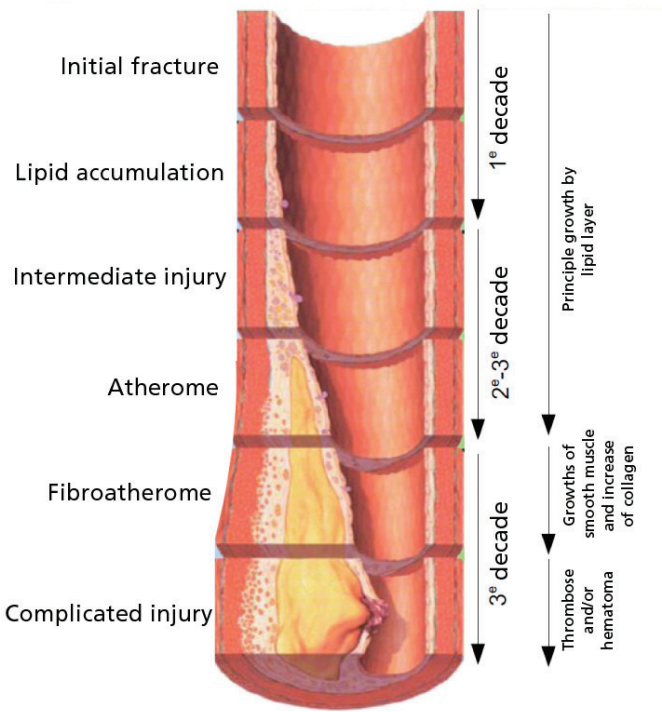
10 major causes of death in 2004 (WHO)	% of deaths
Cardiovascular diseases	16.3
CVA and other cerebrovascular diseases	9.3
Tracheal, bronchial and pulmonary cancer	5.9
Lower respiratory infections	3.8
Chronic obstructive pulmonary disease	3.5
Alzheimer and other dementia-based disease	3.4
Colon and rectal cancer	3.3
Diabetes mellitus	2.8
Breast cancer	2.0
Stomach cancer	1.8

What are the consequences?

Atherosclerosis is a chronic, progressive and multifactorial disease which develops slowly during decades and may remain asymptomatic over a long period of time (Fig 2).

As atherosclerosis is a silent disease, the issue occurs suddenly and may be fatal in many cases. Arteria involved are primarily coronary arteries which irrigate the heart, cerebral arteries irrigating the brain and the large arteries irrigating the legs (iliac arteria, femoral arteria).

Fig 2: Development of atherosclerosis



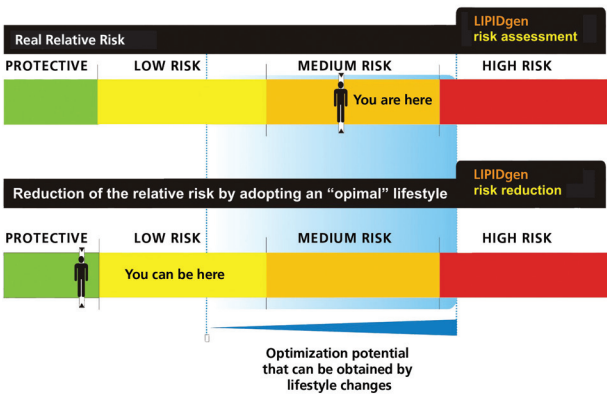
The Test LIPIDgen

This test analyzes several genetic polymorphisms known to be involved in type III familial hypercholesterolemia and the development of atherosclerosis. It also provides precise information on the underlying causes of the lipid metabolism disorders.

Detailed recommendations, based on genetic predispositions and on anamnesis (non-genetic predispositions), allow an individual and personalized prevention guiding to the most adapted treatment for the patient.

The application of the recommendations provided in the report, combined with the treatment prescribed by the physician, represent the ideal solution for an optimal follow-up of the patient's health (Fig 3).

Fig 3: Extract from a sample report



Prevention

It is difficult to anticipate at a young age if an individual will develop atherosclerosis or will suffer from a heart disease: sedentariness, professional activity, nutrition, tobacco consumption, genetic predispositions, etc. have their influence, either individually or in combination. A genetic test can be one of the best approaches to detect as early as possible the relative risk of a person to develop ischaemic diseases due to atherosclerosis and it will easily help to prevent its incidence and/or the development by guiding through an adapted lifestyle change.