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# DIABETOgen

## 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 Type II Diabetes

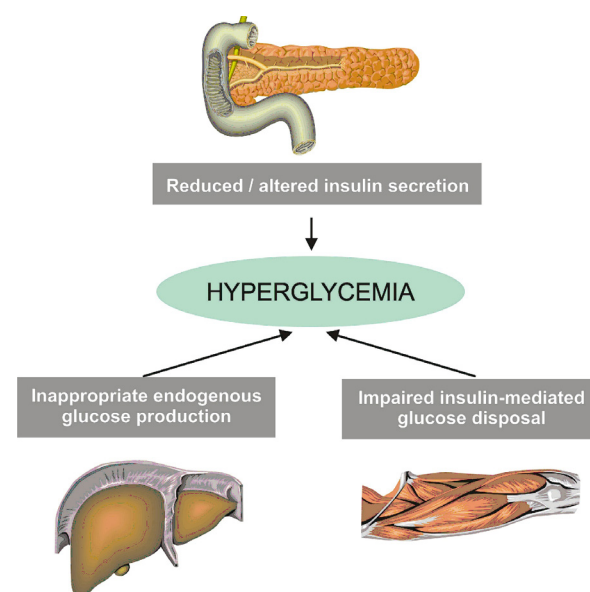
## What is type II diabetes?

Type II diabetes originates from a deficiency in the secretion of insulin and from a resistance to insulin. This resistance results in an efficiency decrease of insulin at the target cells in the adipose, in the hepatic and in the muscular tissues. It is associated with obesity in 80% of all cases (Fig 1).

Overweighted people are more prone to develop an insulin-resistance because the adipose tissue interferes with the organism's capacity to use insulin.

Moreover, the resistance is polygenic and associates a genetic predisposition with environmental factors, especially overweight, sedentariness and nutrition (the type of carbon hydrates and lipids seem to be dispositive).

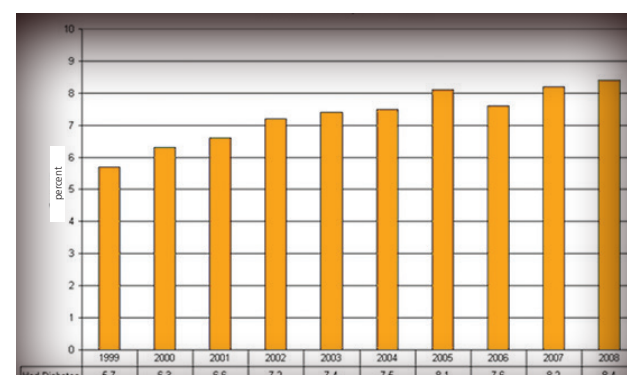
Fig 1: Type II diabetes mechanism



## What are the consequences?

Type II diabetes constitutes a major problem in public health (Fig 2), it represents the main cause for renal failure in any occidental country, a quarter to a third of the causes of myocardial infarction, the first cause for arteriopathies of the lower limbs, a major cause of cerebrovascular accidents and finally, among the diabetic retinopathies the majority concerns type II diabetic patients.

Fig 2: Prevalence of Diabetes Among Adults Age 18 Years and Older (New York States, 1999-2008)



Source: BRFSS (Diabetes = Persons who have been told by a doctor that they have diabetes)

## The Test DIABETOgen

The genetic predisposition is an important point in the development of type II diabetes.

DIABETOgen is based on the analysis of genetic variations allowing the early detection of the mechanisms linked to type II diabetes.

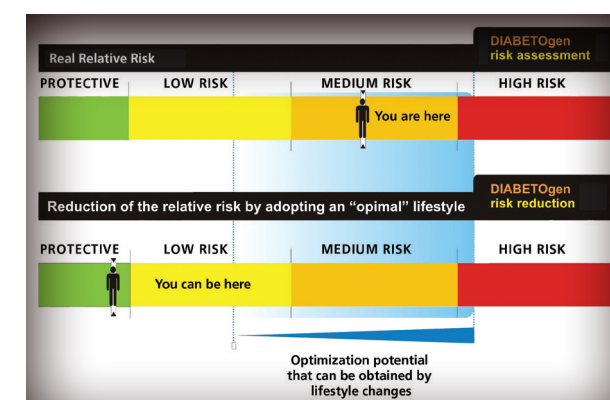
These SNPs are precisely associated to the following information:

- Insulin sensibility
- Leptin sensibility
- Other associated risk factors such as overweight

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

Type II diabetes appears without any apparent signs, hundreds of thousands of people ignore that they suffer from it. Type II diabetes represents the most frequent form of diabetes, with an increasing trend in developed as well as in developing countries.

The typical patient is over 40 years of age. Unfortunately however, since a few years this typical age limit seems to be dropping. In some populations at risk, this type of diabetes may be observed even in children.

Early detection of this disease is an important factor in the prevention and it aims at the same time to avoid associated diseases such as those described above.