

Metabolic Syndrome Sensor

GENOSENSE Diagnostics developed recently a genetic test system with the intention to evaluate inherited risks for the Metabolic Syndrome at an early stage.

The Metabolic Syndrome is a complex clinical condition determined by several, partially interrelated risk factors of metabolic origin. In addition to central obesity it is also characterized by dyslipidemia (i.e. elevated triglycerides, APO-B-containing lipoproteins and low HDL), hypertension, impaired glucose tolerance or manifest type 2 diabetes and also by a pro-inflammatory state.

Although some investigators favor keeping risk factors separate for purposes of clinical management, many others believe that identifying individuals with an aggregation of risk factors provides additional useful information to guide clinical management. Many persons with the Metabolic Syndrome have insulin resistance that predisposes them to either pre-diabetes or type 2 diabetes. Obesity and physical inactivity are the driving force behind the syndrome, but a second set of factors, metabolic susceptibility, usually is required for the Metabolic Syndrome to become evident. Susceptibility factors include adipose tissue disorders (typically manifest as abdominal obesity), genetic factors (polymorphisms), aging and endocrine disorders. Genetic aberrations affecting specific metabolic risk factors can further modify the expression of the syndrome.

The use of an integrated genetic polymorphism diagnostics to assess global risk in addition to a detailed clinical exam to evaluate inherited risks for the Metabolic Syndrome at an early stage seems appropriate because of the increasing prevalence of obesity and type 2 diabetes in almost all countries.

THE METABOLIC SYNDROME PANDEMIC

The available evidence indicates that in most countries between 20% and 30% of the adult population can be characterized as having the Metabolic Syndrome. In some populations or segments of the population, the prevalence is even higher. On the other hand, in parts of the developing world in which young adults predominate, the prevalence is lower, but with increasing affluence and aging of the population, the prevalence undoubtedly will rise.



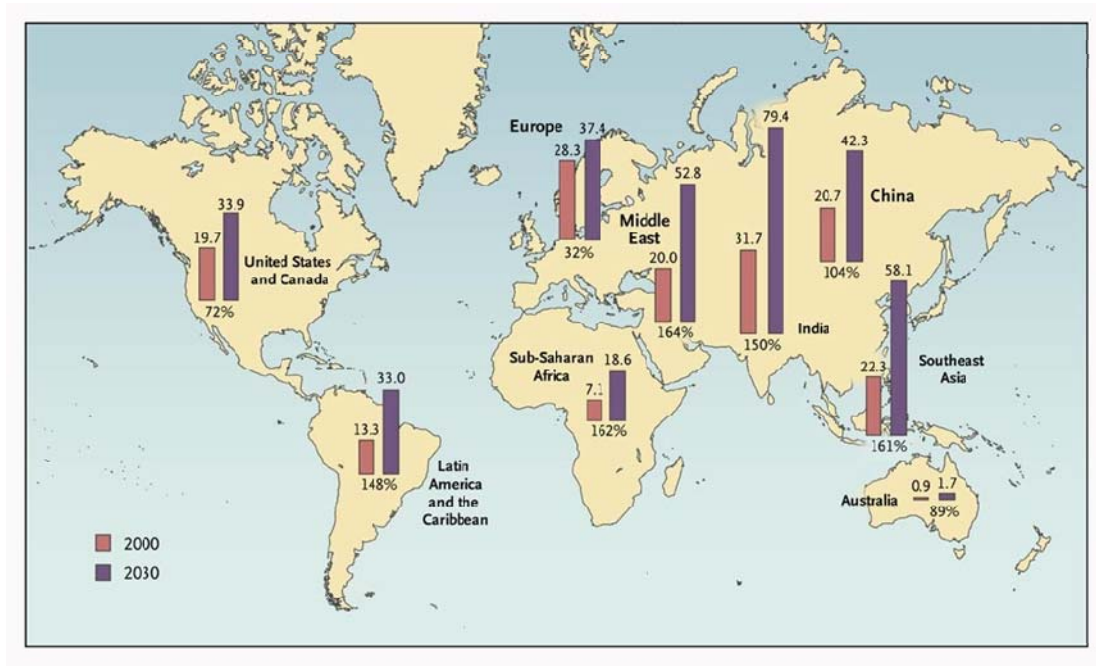
Some facts about the Metabolic Syndrome

*Persons with the metabolic syndrome are at **twice the risk** for cardiovascular disease compared with those without the syndrome.*

*The Metabolic Syndrome raises the risk for type 2 diabetes **5-fold**.*

*The Metabolic Syndrome is often **associated with other diseases** like depression, gout, fatty liver, cholesterol gallstones, obstructive sleep apnea, and the polycystic ovarian syndrome.*

Parvez Hossain and co-workers published in 2007 a chart showing the incidence of type 2 diabetes and the projected dramatic increase worldwide:



Millions of type 2 diabetes cases in 2000 and projections for 2030, with projected percent changes.

(Source: Hossain P et al., Obesity and diabetes in the developing world—a growing challenge, N Engl J Med. 2007 18;356(3):213-5)

The METABOLIC SYNDROME Sensor

From GENOSENSE Diagnostics contains the analysis and medical interpretation of genetic variants (polymorphisms) that are associated with obesity, insulin resistance and type-2 diabetes, high blood pressure, inflammation and abnormalities in the lipoprotein and glucose metabolism. All polymorphisms were carefully selected by a highly specialized team of physicians and natural scientists according to their published scientific evidence.

If you want to have more information on the METABOLIC SYNDROME Sensor - [CONTACT US](#).

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