



Sample Report
Basic Skin Test

SKIN CARE



INTRODUCTION

Our skin, especially the face, is a mirror of our age, and the first signs of aging are visible as early as after the age of 30. While time cannot be stopped, many of its effects on the skin can certainly be slowed down. The most effective method is prevention.

Skin aging depends on two main factors: chrono-aging, a natural process linked to the passage of time and based on one's genetics, and photo-aging, which is the action of sun rays on the skin, as well as lifestyle factors such as diet, physical activity, smoking, drugs, etc.

However, the negative impact of time on the skin is not the same for all individuals, as it depends on predisposing factors written in our DNA. The presence of variants (SNPs) in the genes involved in these physiological processes can modulate individual susceptibility, determining different responses to environmental agents and, consequently, influencing the skin aging process. The concept of personalized prevention is based on this premise: if we know the characteristics of our body through the study of DNA, we can act in the most effective way to make it function optimally.

Genetic testing allows us to highlight the main areas of weakness in the fundamental components of the skin structure.

WHAT THE REPORT INCLUDES:

- Detailed Explanation of the specific test conducted and recommendations to follow.
- Summary Table showing the list of metabolic areas investigated for each test and the summary of the respective results obtained from the analysis of your DNA, providing a quick overview of your general situation and highlighting any compromised areas.
- Bibliography containing the scientific references of the test.

HOW TO INTERPRET THE RESULTS:

-  **Low Risk:** Indicates that the variants identified in the analysis do not unfavorably alter the enzymatic activity of the proteins they encode and/or do not increase the risk associated with certain pathologies.
-  **Moderate Risk:** Indicates that the variants identified in the analysis slightly unfavorably alter the enzymatic activity and/or slightly increase the risk associated with some disorders or pathologies.
-  **High Risk:** Indicates that the variants identified in the analysis significantly unfavorably alter the enzymatic activity, resulting in a higher risk of developing certain associated disorders or pathologies.

The illustrated results, along with the considerations and explanations contained in the following pages of this booklet, should not be considered a medical diagnosis. It is important to remember that genetic information is only part of the total information necessary for a complete understanding of a person's health. Therefore, the data reported here serve as a tool for the treating doctor to make a correct evaluation of the patient's physiological state and suggest an appropriate personalized treatment.



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SKIN
AGING
BASIC



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PHOTOAGING

SKIN AGING BASIC

1. PHOTOAGING

The test evaluates the risk of skin aging with respect to extrinsic factors, namely:

SUSCEPTIBILITY TO ULTRAVIOLET RAYS: UVA AND UVB

Sensitivity to the harmful effects of ultraviolet radiation is heritable. Numerous large-scale studies have identified genetic variations that increase sensitivity to the sun and the tendency to suffer from sunburn (erythema). Some people's skin is therefore 3-4 times more vulnerable to sun damage. In these cases, there is a tendency to develop freckles, a greater propensity not to tan easily, and to suffer sunburn.

RECOMMENDED SOLUTIONS:

- Use high protection creams (preferably with added vitamin A).
- Limit your exposure to the sun for a limited time every day and prefer the sun in the first part of the morning or the second part of the afternoon.
- Protect the area around the eyes very well, using sunglasses.

Failure to follow these precautions with great discipline will almost inevitably lead to rapid skin aging, in the form of loss of skin elasticity, and the appearance of premature blemishes and wrinkles.

The genetic analysis examines the following gene:

- Gene responsible for the risk of extrinsic skin aging: ASIP (Agouti Signaling Protein)

Repeated exposure to ultraviolet radiation (UV_A, UV_B) causes premature skin aging. The effect is achieved through DNA damage to epidermal cells, persistent inflammation, and oxidative stress. The analysis of two variants of a point in this gene reveals whether the individual examined falls into the category of those who have skin that is more sensitive than the general population to environmental insults, primarily solar radiation and UV emissions from tanning lamps, and therefore a greater tendency to skin aging. In the European population, 55% of individuals fall into this category.

The information acquired allows us to formulate a correct strategy to protect the skin from premature aging.

YOUR RESULTS:

Lab ID	Gene	Allelic variants	Genotype		Predisposition
EXTRINSIC SKIN AGING					
GTS005	ASIP	G	G	G	LOW
(Agouti Signaling Protein)		T			

WHAT YOUR GENETICS SAY	
	
<p><i>There is a FAVORABLE genetic profile for the analyzed gene</i></p>	

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ANTIOXIDANT
CAPACITY

2. ANTIOXIDANT CAPACITY

The test evaluates the risk of skin aging with respect to intrinsic factors, namely:

SUSCEPTIBILITY TO DAMAGE CAUSED BY FREE RADICALS

An essential enzyme for the removal of free radicals (SOD2), which is less functional (with half the efficiency) when not localized in its natural site of action, the mitochondrion, exposes a person to the possibility of greater damage from free radicals produced physiologically by all the cells of their organism. This will have a "visible" effect, especially at the epidermis level, with a greater tendency towards skin aging, presenting as thin, atrophic, pale, loose skin, extensively furrowed by wrinkles and inelastic.

RECOMMENDED SOLUTIONS

- Daily and continuous oral intake of strong antioxidant nutraceuticals. Alpha-tocopherol and lipoic acid are recommended, as they have a well-documented effect as scavengers of oxygen radicals produced at the respiratory chain level.
- A healthy and balanced diet includes the intake of many foods' rich in antioxidants such as fruits and vegetables. In particular, the intake of vitamins A, C, and E, and beta-carotene is essential. The best foods against free radicals are:
 - Blueberries and red fruits, rich vitamin A, vitamin C and anthocyanin glycosides
 - Carrots, rich in beta-carotene and vitamin C
 - Kiwis and citrus fruits rich in vitamin C
 - Beets rich in vitamin B9, vitamin C, and potassium
 - Goji berries, real antioxidant super food
 - Dark chocolate rich in flavonoids
 - Green tea and white tea, rich in polyphenols and catechins
 - Oilseeds and nuts

The genetic analysis examines the following gene:

- Gene responsible for intrinsic skin aging risk: SOD2 (SuperOxide dismutase type 2)

The antioxidant activity of the cells of the epidermis is the main way in which they defend themselves from the damage of ultraviolet radiation, other environmental factors such as air pollutants and smoke, and from free radicals that are normally produced within the cells themselves. Antioxidant activity depends on various genes, among which the one for the SOD2 protein stands out, which is found in the mitochondria, the energy centers of the cells where most intrinsic free radicals are produced. SOD2 is so important that life is not possible in its absence. The analysis of the variant of a point of this gene allows us to understand whether it will have its correct localization and action in the mitochondria. Consequently, it indicates its greater or lesser activity. Those with lower SOD2 activity than the general population will consequently be more exposed to damage from free radicals.

The information acquired allows us to formulate a correct strategy to support the antioxidant activity of epithelial cells with targeted food supplements and cosmeceutical creams.

YOUR RESULTS:

Gentras ID	Gene	Allelic variants	Genotype		Predisposition
INTRINSIC AGING					
GTS006	SOD2	T	C	C	HIGH
(SuperOxide Dismutase type 2)		C			

WHAT YOUR GENETICS SAY
<p><i>There is an UnFAVORABLE genetic profile for the analyzed gene, we recommend the use of antioxidant nutraceuticals (please see above).</i></p>

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