XCODE
LIFE

This is a sample report intended for illustrative purposes only. Some content and data have been changed. To purchase the full report, please visit www.xcode.life

Your guide to a personalized skincare routine

SKIN PANEL

**For Informational Purposes Only. Not for Medical use*

Table of contents

Introduction

Have you ever wondered what your true skin tone is? And how much damage will the sun cause to your skin? The skin is the largest sensory organ in the body and the most noticed! There are numerous external factors like the environment and your skincare routine that affect your skin, but underneath that, there is a significant association with your genes.

About 2 million years ago, early hominids shed their hair and exposed their pale skin to the sun-drenched savanna of Africa. Natural selection favored those with darker skin tone as it protected against the UV radiation that caused cancer. About 50,000 to 100,000 years ago, our ancestors who migrated to Northern Climates did not need the protection and evolved their pale skin back. In regions with less sunshine, there was a natural selection for lighter skin, as it meant that they were able to absorb more sunlight to make vitamin D.

Science has shown that every person is unique, and the care required by their skin is different. Analyzing your genetic data will provide practical information that your dermatologist can use to develop a personalized skincare routine.

Some interesting facts about genes and skin.

- **8 sites in the human genome are associated with 30% variation in skin pigmentation**
- **81% of acne prevalence is influenced by genes**
- **A first degree relative with acne increases your risk for it by 4 times**
- **The age at which you notice wrinkles and their severity depend on certain genes**
- **60% of skin aging is influenced by genes**
- **20 to 30% of atopic dermatitis patients have an FLG gene variation**
- **A person who has a sibling with psoriasis is 4 to 6 times more likely to get it**
- **The risk of developing varicose veins is 90% for children with affected parents.**

Gene variations are partly responsible for skin type. Other factors include environmental triggers, stress and diet.

In this report, we profile genes associated with the risk for various skin conditions and signs of skin damage.

We hope this report helps you better understand your skin and nourish and protect your skin based on your genes to showcase healthier skin.

Introduction

Skin health is a complex interplay between genetics and the environment (lifestyle, diet, activity, stress, etc.). Your genes and the environment that you are exposed to both play a vital role in your well-being.

This report is presented in a user-friendly language and format. The following tips will help you get the best information value out of the report.

1. The word "likely" is used often in the report. What does it mean?

People generally know that high cholesterol can lead to heart conditions. However, some individuals with high cholesterol may not develop heart disease. Similarly, smoking can lead to lung disease, but not always. Hence, certain genetic parameters can lead to certain outcomes, but other factors may modify the outcome. "Likely" means it is more likely that one will see the outcome, but other factors may modify it.

2. What does the term “moderate” mean in the report?

Moderate implies neither high nor low, rather an intermediate or an average outcome. For example, a moderate likelihood for wrinkles is intermediate between high and low likelihood.

3. How do I know which result applies to me?

Only results with a check mark (✓) or exclamation (!) apply to you. The others are not applicable. All possible outcomes are provided in the table to provide a context to your outcome.

4. Where did the information contained in the report come from?

The genetic markers used in this report are based on scientific studies published in international journals. A list of references is available to read on our web blog.

5. Some sentences are colored in green, some in brown, and others in red; why?

Low risk for a specific condition is indicated in green while a high risk, is highlighted in red. Moderate or Neutral outcomes are indicated in brown (or orange).

YOUR SUMMARY RESULTS

Trait Name	Your Result	Your Outcomes
Wrinkles Genetic variations that influence the risk for premature wrinkles Learn More	⚠	[illegible]
Droopy Eyelids Genetic variations that influence the risk for droopy eyelids Learn More	⚠	[illegible]
Sun Spots (Lentigines) Genetic variations that influence the risk for sun spots Learn More	⚠	[illegible]

Tanning Response Genetic variations that influence tanning ability Learn More	⚠	
Freckles Genetic variations that influence the risk for freckles Learn More	✔	
Glycation Genetic variations that influence the risk for excessive skin glycation Learn More	⚠	
Excessive Sweating Genetic variations that influence the risk for excessive sweating Learn More	✔	

Cellulite Genetic variations that influence the risk for cellulite Learn More	⚠	[illegible]
		[illegible]
		[illegible]
Stretch Marks (Striae Distensae) Genetic variations that influence the risk for stretch marks Learn More		[illegible]
	⚠	[illegible]
		[illegible]
Varicose Veins Genetic variations that influence the risk for varicose veins Learn More		[illegible]
	⚠	[illegible]
		[illegible]
Antioxidant Levels Genetic variations that influence antioxidant requirements Learn More		[illegible]
	⚠	[illegible]
		[illegible]

Acne Genetic variations that influence the risk for severe acne Learn More	⚠	[illegible]
Eczema (Atopic Dermatitis) Genetic variations that influence the risk for atopic dermatitis Learn More	⚠	[illegible]
Contact Dermatitis Genetic variations that influence the risk for contact dermatitis Learn More	⚠	[illegible]
Psoriasis Genetic variations that influence the risk for psoriasis Learn More	⚠	[illegible]

WRINKLES

Moderate: Moderately likely to have premature wrinkles.

Wrinkles are a sign of skin aging and are caused by various factors such as genetics, skin pigmentation, dehydration, UV exposure, smoking, and alcohol abuse. They are accompanied by the natural aging process and occur when collagen and elastin in the skin

Recommendations:

- You have a moderate genetic tendency to have premature wrinkles.
- If you have premature wrinkles, consult a dermatologist.
- Drink plenty of water. Properly hydrated skin looks younger and is less likely to produce

Genes Analyzed: AHR, IRF4, SHC4, SLC45A2, STXBP5L
Number of Gene Markers Found: 5
Number of Gene Markers Analyzed:9

DROOPY EYELIDS

Moderate: Moderately likely to have droopy eyelids.

Droopy eyelids or ptosis is a condition where there's a sagging of the upper eyelid causing it to droop downwards. The edge of the upper eyelid is either lower than it should be or has excess baggy skin. It can be congenital or caused due to age, certain health conditions,

Recommendations:

- You have a moderate genetic tendency to have droopy eyelids.
- Use a moisturizer every day. Moisturizing your skin will keep it healthy and hydrated, which in turn will help prevent droopy eyelids.

Genes Analyzed: INTERGENIC, MACROH2A2 (H2AFY2)
Number of Gene Markers Found: 6
Number of Gene Markers Analyzed:8

SUN SPOTS (LENTIGINES)

Moderate: Moderately likely to have sun spots.

Sun spots, also known as solar lentigines, are darkened spots on the skin resulting from prolonged exposure to ultraviolet (UV) radiation. It results in increased production of melanocytes (pigment-producing skin cells) and accumulation of melanin. Sun spots are very common, especially in those who are 40 years and older and women. People with

Recommendations:

- You have a moderate genetic tendency to have sun spots.
- Use sunscreen with a broad-spectrum protection factor (SPF) of 30 or higher every day.
- Try to reduce stepping out during peak sunlight hours (10 a.m. to 4 p.m.).

Genes Analyzed: BNC2, MFSD12, IRF4, MC1R, CDKN2B-AS1, PPARGC1B, RALY/ASIP, LINC01877, NONE
Number of Gene Markers Found: 11
Number of Gene Markers Analyzed:11

TANNING RESPONSE

Moderate: Moderately likely to get tanned easily.

Tanning is a response to the sun's ultraviolet (UV) radiation resulting in increased melanin production. This darkens the skin and protects it from damage due to UV rays. Those with difficulty tanning are at higher risk of sunburn, sun spots, wrinkles, folate loss, and

Recommendations:

- You have a moderate genetic tendency to get tanned easily.
- Wear sunscreen every day, even when you are not going out in the sun, and reapply it every two hours

Genes Analyzed: IRF4, TRPS1, RALY/ASIP, TPCN2, ASIP, HERC2 (OCA2), SLC24A4, EMX2, BNC2, TYRP1, PA2G4P4, RIPK5, SLC45A2, KIAA0930, KITLG, ATP11A, TYR, MC1R, DCT, PDE4B, PPARGC1B
Number of Gene Markers Found: 25
Number of Gene Markers Analyzed:28

FRECKLES

Low: Less likely to have freckles.

Freckles, also known as ephelides, are small brown spots commonly found on the face and neck. It occurs due to the overproduction of melanin (skin pigment) when exposed to ultraviolet rays from the sun. Freckles are harmless and are more common among

Recommendations:

- You have a low genetic tendency to have freckles.

Genes Analyzed: BNC2, AKAP1, MSI2, ASIP, BNC2, RP11–62F24.2, IRF4, RAB11FIP2, MC1R, HSPA12A, HERC2 (OCA2), PPARGC1B, NONE
Number of Gene Markers Found: 19
Number of Gene Markers Analyzed:23

GLYCATION

High: Highly likely to have increased skin glycation.

Glucose is the main source of energy for our body. Sometimes excess glucose molecules bind to collagen and elastin fibers and produce advanced glycation products (AGEs) through glycation, a process associated with accelerated aging. Glycation can lead to hardening of

Recommendations:

- You have a high genetic tendency to have increased skin glycation.
- Make sure you're getting enough exercise. Exercise helps release energy and promote skin cell turnover, which can reduce the risk of glycation.

Genes Analyzed: AGER, GLO1
Number of Gene Markers Found: 2
Number of Gene Markers Analyzed:2

Disclaimer

Xcode provides genetic assessment services for research or investigational use, and Xcode's reports should be interpreted or used exclusively by professional practitioners, including but not limited to certified physicians, dietitians, nutritionists, sports therapists, and others in similar professions ("Professional Practitioners"). Xcode does not provide any direct medical advice to individual patients. Only a qualified medical practitioner can provide relevant medical or healthcare advice, diagnosis, or treatment based on this report. Genetic information must always be considered in conjunction with other information about your health, such as lifestyle, family history, risk factors, biomedical data, diet, nutrition, and physical activity, among other factors. A single gene mutation is not the only factor that influences health conditions or outcomes; several other factors like environment and lifestyle may influence the health outcome. You are responsible for ascertaining that your Professional Practitioner is qualified to consider the genetic information indicated in this report in conjunction with all other information made available to them about you, including your family health history, lifestyle, bio-medical data, and any other information that you may provide to the Professional Practitioner. Xcode shall not be held responsible for any misinterpretation of this report by your Professional Practitioner or any matter arising out of this report.

Only full genome sequences are exhaustive. All other forms of genetic tests only provide a limited subset of genetic information relevant to specific conditions. Since this report is not generated by conducting a whole genome sequence test, the results reported are limited to a specific set of mutations known to be associated with specific conditions. Genetic information is also subject to revision based on the latest advances in scientific research. Therefore the interpretation of results reported herein may vary or be altered subject to ongoing research. Sometimes, the interpretations may vary from company to company based on which studies are being given a higher preference compared to others.

Xcode's role is limited to providing genetic test results and a broad set of recommendations. More detailed recommendations that may be specific to you are to be made by qualified Professional Practitioners only. General guidelines provided in our report are for information purposes only and are meant to aid your Professional Practitioner in rendering the relevant professional or medical advice and treatment. While assessing your genetic parameters and providing the report and recommendations, we do not consider your past or existing health conditions and any medication you took (either in the past or currently), even if you may have provided us with such information. Our report and recommendations are to be acted upon in consultation with a medical or other health and wellness professional practitioner.

Your reliance upon the report is solely at your discretion. As with all health and medical-related matters, you should exercise adequate care using the information provided in this report or on our website. Xcode disclaims any responsibility for any errors and omissions by you or other persons either during the collection of DNA samples or delivery of the DNA sample to Xcode. We make no warranties of any kind, either express or implied, including, without limitation, the implied warranties of merchantability, fitness for a particular purpose, accuracy and non-infringement. The information in this report is for Research Use Only (RUO) or Investigational Use Only (IUO), meant to assist in further clinical diagnosis or treatment by Professional Practitioners.